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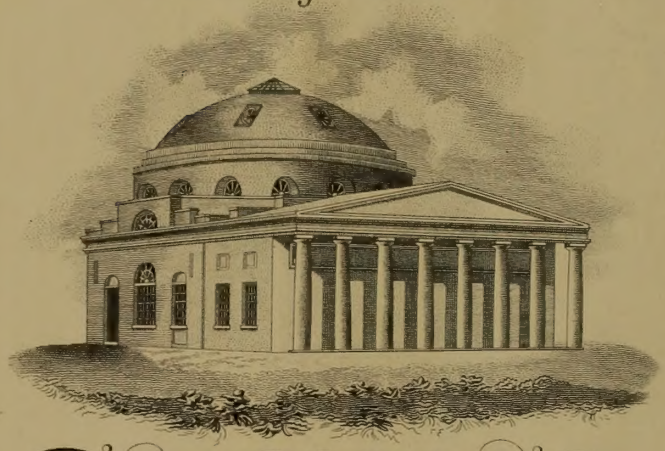

University of Maryland

Inventory of Bound Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Generated Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the degree of Doctor of Medicine and/or Doctor of Physic during the years 1811-1917. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors, 'mislabeled' pieces, titles, and/or pieces. Located in some cases, an additional "Corrected Table of Contents" has been inserted at the begin page of each volume.

The project team who [illegible] and generated the tables of contents were: Elizabeth A. Spencer, Historical Librarian/Project Leader; [illegible] Marie Melanie Perkins, Metadata Management Librarian; Angela Cochran, [illegible]; Benjamin Dorfman, Sarah Elizabeth Fuller, Sahmar and Megan Wolff, [illegible].

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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

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UNIVERSITY OF MARYLAND

THESES

1847, 1850 (b)

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[1] Title page is on verso of leaf 23 at the end of this thesis.
[2] Title page only. Thesis content not found in this volume.

HSHSL 2011 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Year	Notes
Browne, W.H.	Eremacausis	1850	
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UNIVERSITY OF MARYLAND

THESES

1847, 1850 ~~(a)~~ (b)

Abell, ~~Wm.~~ William Matthew	Inaugural Dissertation on Death	23p.	(1) 1850
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Burns, Arthur	Variola	25p.	1850
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Richard, Victor P.	Une Dissertation Surla Phthisie Pulmonaire	32p.	1850
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Readel, John D., Jr.	Measles	18p.	1850
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Murdoch, Thomas F.	Five Cases of Typhus Fever	21p.	1850
Willoughby, ~~J. S.~~ Joseph D.	Uterine Hemorrhage 1847? need to be checked	18p.	1847 ~~(a)~~
Walton, ~~A.~~ H. Rowland	Report of Four Cases	27p.	1850
Dorsey, Richard I.	Amnesia (missing theses check)	~~27p.~~	(2) 1850
Bruce, John I.	Uterine Hemorrhage	22p.	1850
Browne, W. H.	Eremacausis	58p.	1850
Crapster, Milton H.	Cinchona: Its Preparation	20p.	1850
Taylor, George W.	Hysteria	20p.	1850
Rogers, ~~Wm.~~ William H.	Pneumonia	30p.	1850

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1) Title page is on verso of leaf 23 at the end of this thesis.
~~a~~ In Cordell, Annual Catalogue and Matriculation ... is 1847 and Joseph D.
2) Title page only. Content not found in this volume.

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Introductory.

Gentlemen,

Whether the topic I have selected be strictly pertinent to those questions usually the subjects of Medical Theses I am not correctly informed, and if I have erred in adopting this — "Death" — as a fit subject upon which, in conformity with the laws of this institution, I may hazard a few ideas in testimony of the interest I have taken in the investigation of the sciences; it was by virtue of the following qualifications. When we view the whole science of medicine in its every branch of practical and theoretical application to the uses and purposes for which it is designed and its philosophic tenets expounded and revised by successive curious and profound men, we are almost struck with the great degree of excellence and superiority it has attained over almost every

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Introductory

other science which exercise the ingenuity of man. While the science is thus fully investigated and successfully established, it would be of but little avail or interest to one whose knowledge of the science is not based upon his own observations and practice but upon the experience of those whose testimony he received verbally in the lecture room or per typographical points in his studies to select from amid the numerous diseases to which the human family is subject a topic upon which he could advance nothing new. because there he is wanting in practice or perchance originality has been exhausted - If he speak of the diagnosis, prognosis, or treatment of a disease it is only to repeat what you have told him - for to advance an opinion relative to the treatment of a

disease must be vaguely speculative, and against new theories we are warned to beware. If he speak of a medicine, he can but state its history and character because it is but seldom we possess opportunities of making chemical investigations or botanical discoveries. Hence, concerning the idea that a thesis consisting merely of a repetition from a note book or from a standard author must be uninteresting to you, unimproving to the writer, and in no wise indicative of his knowledge of the science. I have chosen my present subject because it is one whose bounds are contracted by "No peeth up Utica". To speak of its physical or moral nature either is productive of a deal of thought and wide discordance of conclusion. Understand me not to say the science of medicine at the present day, is a stand stile one — I hazard no such assertion, it is as it

ever has been a progressive one.
Esculapeus, Hippocrates and other great
physicians of old taught truths of their
days beneficial of much good to man;
they cured diseases and stimulated other
master minds to the investigation of the
science which, contributed no little to
its permanent establishment. And left
names behind as imperishable as the
science of which they are commemorative.
Yet, where are their precepts for the
prevention and cure of diseases? They
live upon record only in the minds
of men, as things that were, being
obscured by the more beautiful and
matured developements of the the
riper years of that science which
they saw but in its infancy. Cullen
when speaking of the diseases of the
chest, said, "under the title of

Pneumonia I mean to comprehend the whole of the inflammations affecting either the viscera of the thorax or the membranes lining the interior surface of that cavity for neither do our diagnostics serve to ascertain exactly the seat of the disease nor does the difference in the seat of the disease exhibit any considerable variation in the state of the symptoms nor lead to any difference in the method of cure". And so stood that and all diseases of the Chest obscure and imperfectly understood till a few years back when Auenbrugger Corvisart and Laennec threw light upon their obscurity by the beautiful and in the language of Dr Watson "brilliant" discoveries of percussion and auscultation which enable us to determine the seat—

trace the progressiand anticipate the true terminations of thoracic diseases. And, but recently have the faculty been in possession of the approved methods of operating for stone in the bladder — lithotomy & lithotrity, for the discovery of which, or at least the latter, we are indebted to Amussat. Nor is it an incredible supposition, that ere the expiration of the nineteenth century we will be in possession of a remedy for phthisis as effectual and certain in its cure as is sulphur in the itch — The foregoing remarks have been made for two purposes, first to show that a thesis upon diseases and remedies which we have been studying must be a mere repetition of what you have taught us, secondly, not that the science of medicine is matured and

perfected to the exclusion of anything new or curious, but by virtue of the sphere in which we acquire our knowledge, we are prevented from making any practical observations necessary to the developement of what is yet unknown. And Gentlemen, if in my zeal to escape the Scylla of plagiarism I fall upon the Charybdis of nonsense. I have no further apology to offer.

Death.

The anatomy of the human structure presents to the mind of the medical student a beautiful and varied study. "The proper study of mankind is man" - again, "Man know thyself" If to know our thoughts, passions and affections, be worthy the consideration of our time how much more worthy is the study of that beautiful mechanism which contains supports and gives vitality to those attributes of

nature referred to in the above quotations. Here we view in all the beauty and grandeur of its delicate minutia the regular dimensions and symmetrical proportions of the temporal throne of our eternity. the soul's abode the brain — for I hold that the mind is the soul of man. In connection with the brain, we study the heart and lungs. not because of their relative positions. but by virtue of their functions, the heart the reservoir of the vitality of man, and the lungs the purifiers of that vitality. The hydraulic. pneumatic and nervous apparatuses present a text for nature's mind, and a field for philosophy's deepest thought. A mind to explore — and a pen to trace their separate dependent and collective independent functions are all that is requisite to show where vitality dwells. from what organized powers it sprang. upon what

functionals, principles it exists, and finally, the pathology of its dissolution. Assuming the hypothesis that there is an appreciable connection between material and immaterial man. If we consider these organs separately, we find each presenting a beauty of mechanism truly astonishing, if collectively they lose nothing of their individual peculiarities of structure, but resolve themselves into a machine whose mechanism and functions proclaim it the conception and execution of a power omnipotent. It is through the actions of these three organs - the heart, the lungs and the nervous system, that life is maintained. The heart collects and distributes the vital principle - blood - the lungs purify and preserve its healthy action - and the nervous system regulates and governs the whole. Death what is death? it is that state in

which the once eloquent voice has become dumb. the ear that conveyed sounds of delightful consolation and hope is now deaf, the eye that was wont to please the soul with all the fascinating beauties of nature, is dark - the mighty arm that was raised in defence of honor dignity and virtue, is palsied and powerless. And man, the once moving, thinking, and potent monarch of the earth, lies an inert particle of his mother element the dust - from whence he first arose. Whence this change? Whence comes this sudden metamorphose from life and light to death and darkness? The blood (sayeth the Bible) is the life - hence, death - because it is no longer propelled to the different organs. it has ceased to flow - it is still - and life is gone. Again, why this arrestation of the vital fluid - why

moves it not onward in its several channels? This is the point upon which I purpose speaking - it is to these causes that the phenomena of death have conducted me - and these causes are many - and all lie in one or other of the three vital organs now under consideration. And with which the physician must be acquainted if he possess any power of combating death. because we have seen that death takes place only in consequence of the non circulation of the healthy vital fluid. The above proposition, that death takes place because there is no blood circulated is clearly proved - not only in theory but by the evidences of morbid anatomy - But why venous blood becomes to be circulated or that the circulation is arrested entirely I purpose illustrating by the pathological actions of those causes which bring about

these alterations in the circulation.
Death is spoken of as beginning at the heart
in two modes - anæmia and asthenia.
both forms being death by syncope.
First; let us briefly consider upon what
the healthy functions of the heart depend.
The heart to perform its office of expeling
the blood from its cavities acknowledges
two laws - first, a due supply of blood in
its chambers for the nourishment of the
system when sent there from - and secondly.
a contractile power in its muscular fibre
for its expulsion. Now when the first
of these laws fail - death takes place
because there is no blood circulated
hence the name of this form of death -
anæmia. And the most prolific cause
of anæmia lies in the depleting power
of hemorrhages. In testimony of the
pathological action in producing this

form of death we have evidence, first, in the empty state of the heart after death - and secondly, by the introduction of blood in the vessels of apparently dead animals - thereby resuscitating the vital action and establishing all the phenomena of life and health - shewing that the expulsive power of the heart was not in fault - and illustrating the importance of a knowledge of these pathological conditions which enable the physician to direct his remedies with a scientific aim - thereby warding off the fatal blow. The other form of syncope or death begining at the heart is called asthenia and is owing not to a want of blood in the heart but to a deficiency of contractile power in its walls. That death often occurs in consequence of the failure of the heart's expulsive power admits of no doubt. Because here again, autopsy demonstrates pathology

instead of empty ventricles and collapsed auricles - we find both sides of the heart distended with blood. Proving that the defect was not in the amount of blood, and consequently, that it was the result of the physical heart. But the other proposition - that this form of death asthenia always begins at the heart, is not the case. The term asthenia applied to death whose immediate cause is the cessation of the heart's action is a very correct one, let the primary cause be what it may. But that death by asthenia always begins at the heart, is not equally true. The heart and the lungs are vital organs - and the office of the heart is to collect venous blood from, and to distribute through the medium of its appendages arterial blood to every part of the human structure except the lungs whose office

it is to receive the impure or venous blood into their capillaries from the pulmonary arteries there to undergo a chemical change by coming in contact with the oxygen of the air by which means it is converted into pure or arterial blood. how so long as these organs continue to perform their functions of receiving oxygenating and distributing the blood life is maintained. But, upon what do their healthy functions depend? - by what are they regulated? Emphatically the nervous system governs their actions. Then the brain is a vital organ - and when by defect of its vital functions the heart is palsied or the muscular movements of respiration are suspended, death is the result - and surely, it began in the nervous system. For no more can the heart and lungs carry on the circulation independent of the functions of the brain

than can the lungs and brain carry it on independent of those of the heart. Then of the vital organs the one which first receives the deadly effect of a given cause be that cause what it may - is the seat of the begining of death. I propose to illustrate death by asthenia where it begins not at the heart, by the following evidences. If the upas antiar be introduced into the system - death is the speedy result - and upon examining the heart after death both sides of it are found full of blood. Why then did its not contract? it wanted not a blood stimulus, its functions ceased because of the effect of the poison on the brain thereby destroying its influence over the heart. Again; a sudden blow is received on the Epigastrium death suddenly follows. Why? because there is no blood circulated and

the blood has ceased to flow because the heart has no power to contract on it, and this inertia of the heart is the result of the shock to the nervous system — made by the infliction of the blow upon the Epigastrium —. Yet, there are cases in which death takes place by asthenia begining at the heart of which we have a good example in the mechanical resistance offered to the free play of the heart by effusions which press upon and arrest its movements. Here death truly begins at the heart, because the heart itself, is the first vital organ whose functions are interfered with — Then we have these differences, in death by anamia and death by asthenia — In both modes it is the result of the non-circulation of the blood, and in both the functions of the nervous system are arrested — In the first case,

this suspension of the nervous functions arises from the want of blood to the brain, and is therefore the effect of a cause - while in the second form, this suspension is dependent upon and is the effect of the exciting cause, but which effect becomes the cause of the final effect - death by paralyzing the heart. Shewing in the first case, that the suspension of the nervous system, is the result of the non-performance of the heart's functions, and in the second case, that it is the cause of this defective action of the heart -. We come next to consider the other two forms of death spoken of by the Pathologist - Coma and apnea which directly interfere with the functions of the lungs. These organs, like the heart are subject to two laws whose unanimous co-operation is necessary to the performance of their functions - aerating of the blood

These laws are - first healthy action of the respiratory muscles - secondly, free access of air to the lungs In either of these forms death is the result of the circulation of venous blood - Death by the failure of the first of these laws is called coma, and is the result of a morbid state of the brain controling the reflex action of the medulla oblongata, thereby influencing the involuntary movements of the thorax, and subsequently arresting the arterialization of the blood. Thereby causing venous blood to enter the arteries which produces death by its poisonous influence on the brain - That this is the true philosophy of death by coma, we are assured by the evidences of experiments on living animals by artificial respiration and by morbid anatomy. The latter furnishes the following phenomena - The right side of the heart - the lungs - the cava and the

whole venous system are gorged with dark blood - while the left cavities contain but a small quantity - and that venous. Proving by this empty condition of the left heart - that venous blood has been sent to the brain where it is found and thereby producing death - This form of death then begins at the brain, and not at the lungs as has been said by some. Because we have seen that the blood was not purified in consequence of respiration being suspended by the influence of the already deranged nervous system. - The last form of death to be spoken of, is called apnea - which begins at the lungs - The causes giving rise to this mode of dying, are smothering, drowning throttling or any obstruction to the free passage of air to the lungs. Here also pathological anatomy proves the correctness

of the above proposition viz. that death is the result of the circulation of venous blood. Indeed there are no anatomical differences between death by coma and of death by apnea - yet they differ in their modes of affecting these changes... Death by either of these modes, as we have already seen is the result of the circulation of venous blood - In the first of these forms, the animal functions or the power which regulates the movements of respiration is the first affected - therefore, the cause of this venous circulation - hence death began at the head... In the case, the circulation is the first to suffer - consequently it is the cause and not the effect of the animal functions - and here death began at the lungs. We have now considered the different forms of dying - which in a summary stand thus - Two forms begining at the heart, anamia and asthenia - Two

forms begining in the nervous system coma and asthenia - this latter term as applied to death begining in the nervous system - may be objected to - but, I know of no better name as it is the immediate result of the cessation of the heart's action, although that was not the vital organ to receive the primary effect, as I have instanced in the poisoned effects of the upas - but here it may be said that the heart was the first vital organ upon which it acted - because we know that the blood undergoes physical changes and it may be chemical and being in direct contact with the walls of the heart may there exert its primary effects. But such is not the case in many other instances, for example, great emotions of the mind, a sudden blow &c. are known to cause the same physical change - the sudden stoppage of the heart - but here

Death

The first impression was made upon the nervous system. Hence death began not at the heart. And there is one form of death begening at the lungs apnea or asphyxia of which I have said sufficient.

An Inaugural Dissertation on Death.

Submitted to the Examination of the Provost Regents and Faculty of Phys. of the University of Maryland for the degree of Doctor in Medicine.

by

Wm. Matthew Abell

of

St. Marys County

Maryland.

1850

An Inaugural Dissertation on Pneumonia.

Submitted to the examination of the Provost, Regents and Faculty of Physic of the University of Maryland. For the degree of Doctor of Medicine.

By James R. Bradwell. Of Maryland.

To

Samuel Chew. M.D.

With the greatest respect for his talents as a physician, and the deepest gratitude for his kindness as a teacher, These few pages are affectionately inscribed

By his pupil.

J. R. Bardwell.

The term Pneumonia is now generally applied to inflamation of the substance of the lung. By some of the best observers, it has been called, inflamation of the parieties of pulmonary vesicles, or air cells, or both combined. Dr Stokes says. "He who would call pneumonia, bronchitis of the terminal tubes, would hardly be guilty of a misnomer." But the first definition seems to me to be sufficiently concise, and is the one I propose using. The varieties of pneumonia are various, and are founded principally on the different portions of the lung involved, and upon the general condition of the system, character of the fever, &c. Thus, when the inflamation occurs in one lobe of the lung, it is called, Lobar pneumonia. When it affects small portions, as one, or more lobes,

it is called, Lobular pneumonia. When it occurs in both lobes at the same time the term Double pneumonia is used. Pneumonia is always accompanied with some inflamation of the pleura; and when considerable portions of that membrane are involved, the term Pleuro-pneumonia is employed. When the desease comes on in a person debilitated by excess, characterized by extreme prostration, and a low adynamic condition of the system, together with that form of accompanying fever; it is called Typhoid pneumonia. If attended with any marked derangement of the hepatic function; it is called Bilious. Pneumonia may be either acute, or chronic. The latter however is very rare, and always the result of the former. In speaking of the anatomical changes, I shall

follow the plan of Laennec, and divide the desease into three stages; noticing the changes observed in each separately, and in their order. In the first, or that of engorgement, the lung is of a deep red colour, crepitates under pressure, although in a much less degree than in health. The air vesicles are found nearly crowded together, and the passage of the air almost obstructed, by an effusion of lymph, and serum. It is more compact, retains the impression of the fingers, and, although heavier than in health, still, floats in water. In the second stage, or that of hepatization, the lung becomes solid, and resembles liver; hence its name. It now no longer crep-itates under pressure, the vesicles, which in the congestive stage, were nearly crow-ded together, are now entirely closed,

and the passage of the air is quite obstructed: The lung now sinks readily in water; when the chest is opened, it does not collapse as in health; when torn it presents numberless minute granules, which Dr Williams ascribes to interstitial deposit of lymph in the parietes of portions of the bronchial tubes, and vessels. The condition of the lung in the third stage, or that of gray hepatization, resembles the second, excepting in colour, and, it is somewhat softer. The three different states described are not always found distinct: Sometimes we find them all three present in a portion of lung at the same time: giving to it a mottled appearance. The pathological changes observed in the lobular variety, differ from the common, or lobar, only that

they are found in isolated portions, or lobules, with healthy lung intervening. The bronchial tubes, and glands, are generally found inflamed, enlarged, and of a deeper colour: thus accounting for the fact that bronchitis is almost always found as an accompaniment of pneumonia. The right lung, is much more frequently found affected than the left; and the lower lobe, than the upper. In children it generally occurs in both lungs. In describing the symptoms of pneumonia, I shall speak first of the physical signs, as it is through these only, that we are enabled to establish a correct diagnosis. In the first, or stage of engorgement, there is slight dulness afforded by percussion. But auscultation gives us one sign which is perfectly

plain, and need never be mistaken: that is the crepitant rale. This is minute, uniform, and dry; best heard during a deep inspiration. It has been compared by Laennec, to throwing salt upon heated iron, or rubing a lock of hair between the fingers, near the ear. De Power, compares it to the sound produced by compressing near the ear, a peice of sponge cake. This dry crepitant rale, always means pneumonia. It seldom remains more than six, or eight hours in one place. The respiratory murmur may be intermingled with this rale, or it may be absent entirely. The voice, and cough are generally clearer, and louder, than in health. In the second stage the crepitant rale ceases to be heard; but in the place of it, we have bronchial respiration, which is as characteristic

of this stage, as the crepitant rale was of the congestive. It may be heard both, during inspiration, and expiration. This sound, has been compared to that produced by blowing through the hand, or, to the whispered word, who. It is best heard at the root of the lung, because there the bronchial tubes are larger than elsewhere. As the lung is now solid, there is dulness on percussion, but not so great as in pleurisy. If the patient speaks, his voice sounds much louder, and clearer, than in health. The vocal thrill is generally much increased. Dr Wood says. "That in some instances, during the passage from congestion to hepatization, before the latter is fully formed; the crepitant rale, and bronchial respiration, are often mingled together, and give rise to a sound, com

-pared to that produced by tearing taffeta." In the third stage, the signs are nearly the same as during the second; but generally a coarse mucous rale is heard. If an abscess has formed, we have all the signs of a tubercular cavity, as in phthisis. In the lobular variety, the signs are nearly the same excepting, that in many cases, the crepitant rale is not heard; and percussion does not teach us as much. The physical signs, are in fact often unsatisfactory early in the disease: but are much more important as it advances, and assist much in forming a diagnosis. Pneumonia is generally a frank inflamatory disease, but not always. The general symptoms are pain, more or less severe felt in some portion of the chest; difficulty of breathing, cough, peculiar

expectoration, and fever. Of each of these I shall speak more fully. The disease is generally ushered in by a decided chill, sometimes it is preceded by a feeling of weariness, and lassitude for some days, and it often succeeds to bronchitis. The pain is generally in the commence-ment of the attack, sharp, and severe: is increased by cough, pressure, and full breathing. But it is oftentimes, and more particularly in the advance-ed stages, merely a dull aching sen-sation, amounting sometimes to nothing more than a feeling of soreness, and oppression. It is sometimes seated in the side, and back, but usually a little below, and outside of the nipple. Sometimes it is felt upon both sides. When so, there is reason to believe, that both lungs are affected. The sharp

lancinating pain often complained of, is owing to inflamation having extended to the pleura. Sometimes the patient is unable to lie on the affected side; this also is probably owing to the participation of the pleura. Dyspnoea is a symptom which is always present in pneumonia. Watson says. "In general it bears a direct proportion to the extent, and severity of the disease". The number of respirations are generally increased, from the average standard, which is 18 or 20 per minute, to 30. 40. and sometimes even 60. per minute. It is sometimes so distressing that the patient is obliged to assume the erect posture. The cough in this disease is never paroxysmal; but occurs in single, short efforts, not more at night than in the day time. It is generally more in adults, than in children. In

some cases it is severe, and painful; in others mild. It is always at first dry, but after a few days is accompanied with the expectoration peculiar to the disease. The expectoration may at first consist of simply mucus, but on the second, or third day, it consists of a rusty sputa, composed of blood, and mucus combined; and has the appearance of a solution of Gum Arabic, in water, and is so tenacious as to adhere to the sides, and bottom of the vessel containing it, when it is turned bottom upwards. This rusty, viscid sputa is perfectly characteristic of pneumonia: it means that and nothing else. It sometimes indicates its existence when the physical, and general symptoms are unsatisfactory. Yet pneumonia may, and often does exist without this, as in the

case of children, and old persons. When catarrhal symptoms are united with those of pneumonia, we see in the same vessel, sputa characteristic of both affections, thrown up at different times. In the third stage, the sputa often becomes watery, and dark colored, looking like liquorice water; this may generally be considered a fatal symptom. Fever is always present in this disease, and in some cases, seems to be the principal affection. It varies however in degree; being in some cases so mild as almost to escape notice, in others very intense, attended with flushed cheeks, pain in the head, and delirium. This latter is looked upon as an unfavorable symptom. The fever is usually of a remittent type, with daily exacerbations, occuring mostly towards night

with a marked increase of all the symp-
toms. The pulse is generally full, and
strong, and not much accelerated. The tongue
is moist, and covered with a whitish
fur. Thirst, and loss of appetite are
almost universal. The skin is hot, and
dry. The urine scanty. Vomiting, and
diarrhoea, often exist; more frequent-
ly the latter, and in the advanced
stages. I have thus far given a de-
scription of the disease as we most
commonly see it. But as there are
some symptoms peculiar to each of
the varieties; it will be necessary,
briefly to allude to them. In the
lobular form, which occurs most
usually to children, under six years
of age: the symptoms are often so mild
as to be unnoticed, or confounded with
some other previously existing disease.

But when it is somewhat advanced, fever sets in, with a rapid pulse. scarcely ever under 120. sometimes as high as, 140. 60. or even 180 per minute. The respiration varies from 40. to 70. and sometimes 100, in the minute. The cough is frequent; in some cases hard, and dry, in others loose; but generally without any expectoration. During the act of breathing, there is great expansion, and contraction of the, alae nasi. The peculiarity in the physical symptoms, have already been mentioned. When symptoms of hepatitis, or of deranged hepatic function; are associated with pneumonia, it has been called bilious. But the most common form, is that which is found in connexion with remittent, and intermittent miasmatic fevers. We generally have along

with the pneumonic inflamation, pain, or tenderness in the right hy-pochondria, a yellowish hue of the eyes, and skin, nausea, and vomit-ing. Typhoid pneumonia, occurs mostly in persons of broken down constitutions: and in those who have been exposed to depressing causes. The general symptoms are those of depression. The pulse is small, and weak; and sinks readily under the loss of blood. The tongue is cov-ered with a brownish fur, and is often dry. Solides collect around the teeth, and gums. The evacuations from the bowels are dark, and have an offensive odour. There is gener-ally throughout the decease, stupor, and low delirium. The expectoration is bloody; sometimes consisting of pure

blood. It is never so viscid as in the common form; and is ordinarily more copious. The physical signs, differ in this respect; that there is not so much of the crepitant rale, but its place is supplied with mucous sounds. The diseases with which pneumonia, is most liable to be confounded, are bronchitis, pleurisy, and phthisis, in some of its stages. Almost all of the symptoms observed in pneumo-nia; are also found in the diseases above mentioned. But the rusty spu-ta is pathognomonic, and always means pneumonia; and also that it has passed into its second stage. But this, as before remarked, is some-times wanting. The watery, liquorice coloured sputa, is equally character-istic of the third stage.

In the first stage, the dry crepitant rale is pathognomonic; and whenever heard means pneumonia. In bronchitis, there is no pain in the side, but merely a feeling of soreness; or a burning sensation: usually felt in the anterior, and upper part of the chest; in the vicinity of the sternum. The sputa never has the viscidity, and rusty appearance of pneumonia. The fever is more moderate. The pulse is small, and soft. The rales are coarser, and moister. There is never dulness on percussion; unless the two diseases are combined. Fever, dyspnoea, prostration, and pain are symptoms found in pleurisy as well as pneumonia But they are all with the exception of pain more severe in pneumonia. This is generally the most severe in pleurisy.

But it is usually confined wholly to one spot, while that of pneumonia is not. In the early stages of pleurisy there is no crepitation. The dulness on percussion is much greater, and more extended. There is a perfect absence of all respiratory sounds. When the ear is applied to the chest; we have instead of the loud resonant voice of pneumonia, a weak, tremulous, bleating voice; peculiar to pleurisy. The distention of the chest, which sometimes occurs in pleurisy from copious effusion; is wholly wanting in pneumonia. The expectoration is very different in the two diseases; being dusty coloured, and viscid in the one; mucous, and transparent in the other. It is only in the chronic form, that pneumonia might be confounded with phthisis; and even

here, there need be but little difficulty if sufficient attention has been paid to the previous symptoms, as the crep-itant rale, and rusty sputa of the former. The most cases of primary pneumonia get well. The disease is remarkably mild between the ages of six, and twenty one. The chief cause of its fatality amongst children, is its complications with other diseases as measles, and pertussis. When the inflamation occupies the upper lobes of the lung, the fatality is greater, than when the lower. Double pneumonia is much more dangerous, than the single form. The danger in fact in all cases; is in some measure according to the amount of lung involved. The typhoid variety is more usually fatal, than the franck.

occuring, as it generally does, in per-sons of debilitated constitutions, who will not bear a strict antiphlogistic treatment. "Statistical investigation has shown that pneumonia proves fa-tal in an increasing proportion, after the twentieth year; infancy being excepted." Among the most frequent causes of this disease, may be mention-ed, changes in the weather, and sudden exposure to cold when warm. Cold may in fact be considered, as one of the most efficient predispos-ing causes. Excessive use of the voice, is also a predisposing cause. It is a frequent complication in typhoid fever: and is one of the most common attendants upon reaction, after the col-lapse of malignant Cholera. The progress of the disease is generally rapid:

with a marked increase of all its symp-toms at night. The time elapsing from the first, to the second stage is short; not generally longer than 48 hours, and sometimes even shorter than that. This fact should be borne in mind, as the first stage is the time, in the which to cut short the attack. But in the great majority of cases, this stage has nearly, or quite passed, before the pa-tient is seen. And the disease has ad-vanced to the stage of hepatization. The average duration of pneumonia, may be stated, to be from 12. to 25 days; but it sometimes continues from one to two, and even four, months. The basis of the treatment in this di-sease is antiphlogistic; and the great remedy is blood-letting. Taken at the commencement it is

heroic, and often strangles the disease. No disease bears the loss of blood better than open, well developed, pneumonia. It does good, not only by subduing inflamation; but also by diminishing the labor of the lungs, and thus allowing them rest. If it does not strangle the disease at once; it relieves pain, and dyspnoea; and alters the character of the sputa. In determining upon the quantity of blood to be taken, in any given case, we must be guided by the stage of the disease, state of the pulse, and constitution of the patient. But as regards the pulse; it must be borne in mind, that from the extent of the disease, and excessive action of so vital an organ as the lung; we have the

pulse small, and weak. But it is not owing to debility: and it is necessary to bleed, although the pulse does not seem to indicate it. It will be observed to rise, and become fuller, after a vein has been opened. Dr Power's rules for bleeding, are as follows. If called early in the disease, take from 12, to 30 ℥ at once, according to the constitution, and condition of the patient. Do not produce absolute syncope: but just to reduce the action of the heart, and arteries. After the first bleeding if reaction comes on violently, bleed again. If upon examination the next day, the crepitant rales are heard, repeat the bleeding. When hepatization has taken place bleed; but be must be more moderate;

it now does good by creating a thirst in the veins. Continue to bleed as long as pain, and dyspnoea exist. It must generally be repeated six or seven times during the course of the disease. If the patient has been ill several days, although it may be necessary to abstract blood; caution must be used. Diaphoresis, is no counter indication to bleeding, as some suppose. The same is true as regards the presence of the menses. In children more caution must be used; they will not bear the loss of blood as well as adults. When they are under twelve months of age, local, is preferable to general bleeding. Old age bears the loss of blood better in this, than any other disease. When the disease is secondary to

measles, or the exanthemata; we must bleed as boldly as, in the primary form. In typhoid pneumonia, we must use general bleeding with care. Leeching, and cupping, are generally the most that can be done in the way of direct depletion. But as a general rule, in pneumonia, bleeding is the main remedy. After that has been carried as far as may be deemed practicable, tartar emetic, is the next agent in value. This should be given in centi-stimulant doses. The first, will often produce vomiting, and purging; after that, it is generally tolerated. Should however the vomiting, and purging continue, it may be checked by a few drops of hydrocyanic acid, a few cups, or a mustard plas

-ter applied over the abdomen. If the desease continues violent after the second, or third day; increase the dose of tartar emetic, until 20. or 24 grains are taken every 24 hours. In using this agent however, we must be guided by the general symptoms. If gastritis exists, or supervenes, it must be dispensed with. It should be given in solution, as in that form it is less apt to cause pus-tulation of the throat. Another plan of treatment, used extensive-ly in England, and also in this Country; is by calomel, and opium. This is good, but is far inferior to the first. It is slower in its action, and more apt permanently to af-fect the system. If tartar emetic is contra-indicated, then we may resort

to the calomel, and opium. It may be used in all cases, to hasten absorption; when the physical signs only remain. Dr Watson says, "When the desease has reached the second stage, mercury is more worthy of confidence than antimony." When used it should be preserved in, until the gums are made tender: the slight ptyalism thus arrests the effusion of lymphe, which has a tendency to destroy the texture of the lung. Blisters, in the early stage of the desease aggravate the fever, and do more harm than good. The only time when they are of service, is after active inflamation has subsided; and hepatization only exists: then they do good, and should be used, and repeated if necessary.

In the advanced stages of this de-
-sease, should the strength fail, and
the whole system become depressed;
the use of stimulants becomes ne-
-cessary. Of these the carbonate of
ammonia is by far the best. It
may be given alone, or combined with
infusion of serpentaria. The treat-
-ment of the lobular variety, does
not differ materially from that of
the lobar; occuring however as it us-
-ually does in children; the meas-
-ures must be used less boldly. The
age of the child must always be
considered; and in young infants,
leeches, be substituted for the lancet.
As children do not expectorate,
emetics must be given occasionally
throughout the disease. For child-
-ren calomel is preferable to antimony.

For bilious pneumonia, the mercurials should be employed from the commencement, and continued until they affect the mouth. Bleeding is not generally well borne in the typhoid variety, and must therefore be resorted to with great caution. Cupping, and leeching, are here as in the lobular form, generally the most that can be done in the way of direct depletion. As soon as signs of prostration show themselves, stimulants as carbonate of ammonia, wine whey, &c, are to be used. Oil of turpentine is a valuable stimulant in low cases. The diet in this form should be nutritious, and sometimes even stimulating. During convalescence purgatives are useless; but the bowels should be kept open by laxatives.

This with a strictly antiphlogistic diet, and confinement to bed, in a large, well ventilated room, of a moderate temperature; is generally all that is necessary.

The diet however, should be guided by circumstances; as a general rule solid food should be avoided for some time; and returned to slowly. In persons of intemperate habits, a small portion of spirits, may be allowed to prevent the occurrence of delirium tremens, and a low adynamic condition of the system, after the active stage has passed. But it must be given with great caution, and in very small quantities: or it will do more harm than good.

I have now finished what I have to say on this important; and to me, very interesting disease. In selecting it as the subject of my thesis, I did not expect to be able to advance any new ideas; that I have left for older, and more experienced heads than mine. My intention was merely in such a manner to collect, from the ideas of others; as to give a brief, and as concise a description of the disease, as my poor abilities, and humble attainments would allow. To those then; to whom these imperfect pages are submitted for perusal, I would say.

"Dont view them with a critics eye.
But pass their imperfections by."

Before concluding, I cannot forbear, acknowledging, the large debt of gratitude under which I am laid to my kind instructors, of the University of Maryland; for the deep, and untiring interest, they have shown, in the advancement of those under their tuition since my connection with the institution. And if by labor, and study: in future life I am enabled to reflect honour upon them, I shall feel amply repaid, for all the trials, and difficulties I have had to encounter. And it is my most ardent hope; that their useful lives may long be spared, to occupy as they now do; the first rank in their professions.

An

Inaugural Dissertation

on

Variola.

Respectfully submitted to the examination

of the

Board, Regents, and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Arthur Burns

of Baltimore City

According to the custom of this honourable Institution (which makes it incumbent upon every candidate for the Degree of Doctor of Medicine, to write a dissertation upon some subject connected with the Science of Medicine) I purpose giving a short description of Variola. Nothing original can be expected upon this subject (on which so much has been written and said) from one who has never had an opportunity of witnessing the course and treatment of this disease. I therefore have given an account of it, not from my own experience, but from that of others, who have had experience, and are far more competent than I am, to describe it. This dissertation is a compilation from the best authors on the subject. I have written some passages as I found them in the books, because they are better described there, than could possibly be done by myself.

Variola or Small Pox

Variola or Small Pox is one of the contagious Exanthematous fevers. It commences with a fever, which continues for three days; then the eruption appears, which passes through the three different stages of Papule, Vesicle, and Pustule, and arrives at maturity about the eighth day. The pustules continue after this in a state of suppuration during a secondary fever of several days duration, they then dry up and form scabs, which fall off at the end of the third or fourth week, leaving small irregular cicatrices on the skin which are permanent. It is not known at what period Small Pox first made its appearance, there is no positive proof that it was known to the Ancients, some indeed have tried to prove that it was known to Galen, but I believe that the opinion is not generally received. It is supposed to have infested India and China from the earliest ages. It was first introduced into Europe by the Saracens during their wars with Spain. It made its first appearance in Arabia about the time of the birth of Mahomet. It was probably first brought from Ethiopia into Arabia, and from thence spreading over all Europe, but more particularly in the eleventh and twelfth centuries, during the crusades. There are two varieties of Small Pox. Distinct and Confluent. The pocks of the former are separated from one

another, generally few in number, of a circular form, elevated and distended. Those of the latter are very numerous, depressed, very irregular in form, and running together so as to form one mass. The time which elapses between the reception of the poison into the system and the first attack of the disease, is called the period of Incubation, it varies from seven to twenty days. During this period, the patient appears to be in his usual state of health, but sometimes a slight febrile disturbance occurs. The other periods are – the Initial fever, the period of the Eruption, and the period of the Decline.

Distinct Variola

The symptoms that mark the commencement of this form are the same as in all other fevers, – rigors, pains in the small of the back, nausea, and vomiting, furred tongue, want of appetite, thirst, Sometimes other symptoms occur, – coryza, great flow of tears, delirium in the adult, and convulsions in children. Sometimes there is stupor, sometimes wakefulness and restlessness. The fever lasts for three or four days, then the eruption comes out in the form of red spots, first on the face, and then on the neck, extremities and body, about twenty four hours elapse before it is fully out, then the fever entirely ceases. In some rare cases the eruption shows itself first upon the body, or extremities. This variety, of the disease

runs its most natural course, The eruption is at first papular, On the second or third day, they contain a clear liquid at their apex and on the third or fourth day, the most of them are a little depressed, the cuticle is bound down to the cutis vera, this is the vesicle, they feel hard and have a firm rounded base, They soon become pustular, and on the eighth day of the disease, and fifth day of the eruption, they become fully formed, and are distended instead of being umbilicated. The face gradually swells during the time that they are forming, so much so as often to close the eyelids, and the skin between the pustules is of a damask red colour. On the eighth day of the eruption, and the tenth and eleventh day of the disease, the pustules attain their maturity, they also begin to break on this day, to dry up and form scabs, these leave behind them purplish red stains, which gradually fade, or a pitted scar that lasts forever. The swelling of the face begins to subside after the eruption becomes pustular. Those upon the feet and hands swell, as the swelling of the face diminishes. Some of the pustules do not burst at all, but shrivel up, this takes place on the extremities more particularly. In children the scabs sometimes begin to form on the seventh day. Occasionally they do not begin to form untill the ninth day, when the disease is severe in adults. During the eruption there is often an itching of the skin, an eruption comes out on the

mucous membrane of the mouth, fauces, eyelids &c. It makes its appearance two or three days after the eruption on the skin, the spots are white and circular. These are generally resolved without ulcers or scabs forming, they contain neither lymphe nor pus. In the interstitial spaces the membrane often becomes red and inflamed, and on the seventh or eighth day soreness of the throat and salivation often occur. The salivation is at first thin and copious, but during the period of maturation it becomes thick and ropy, this is a great annoyance to the patient, as it is got rid of with difficulty. During the period of maturation a very disagreable odour is exhaled from the body of the patient, by which the disease is easily recognized. From the seventh to the ninth day a secondary fever occurs, which is called the fever of maturation. The fever declines as soon as the scabs begin to form. The tongue cleans, the appetite returns, as soon as the skin is relieved of its loathsome burthen, the patient regains his health. The disease runs its course from two to three weeks.

Confluent Variola

The Initial fever is usually more violent than in the distinct form. The pains in the small of the back are more intense, convulsions, ~~delirium~~, delirium, and stupor are more frequent, and the sickness more distressing. The eruption appears earlier, but there is not

the same degree of abatement of the fever as in the Distinct.
"The pimples are at first very small, and crowded together in patches and sometimes accompanied by an erythematous efflorescence like Scarlet fever or Erysipelas. As the disease progresses the pocks do not fill up so completely, nor rise so much above the surface as in the distinct variety. "Their colour is different, it is whitish at first, and then of a brown hue, occasionally they are bluish or purplish. "The secondary fever commences just when the pustules have matured and begin to dry up, which is about the eleventh day of the disease, and the eighth day of the eruption. "This fever which is slight in the distinct Small Pox is often severe and perilous in this variety. It is at this time that death is of more frequent occurrence. "The sore throat, the swelling of the tonsils, and fauces are greater, and the salivation more copious and distressing. In children, diarrhoea occasionally takes the place of salivation, which does not often occur in them. During the period of maturation an intolerable fetor is exhaled from the body of the patient, about the same time the patients are tormented by an insupportable itching, so that they scratch off some of the scabs, and occasionally, a bloody or sanious discharge exudes from the raw surfaces. "There are other symptoms to which the patients are liable during the

secondary fever. – erysipelatous inflammation leading to the formation of abscesses in various parts of the body, swellings in the groin and axillae, sometimes resulting in suppuration. Sloughing ulcers on the hips and sacrum, phlebitis, and occasionally the large joints are found full of pus. Dyspnoea is apt to occur, causing death by the air passages becoming clogged by their viscid secretions, or by closure of the glottis. Not uncommonly the eruption and inflammation extend down the trachea, larynx and to the primary divisions of the bronchi, giving rise to cough, painful attempts to expectorate, hoarseness, and occasionally complete loss of the voice. "The surface often swells to a great extent, particularly the face and scalp, the swelling is so great that sometimes the eyelids are closed and the countenance entirely changed."

Variolae Nigrae

Variola Nigrae, bloody or malignant Small Pox, is characterized by a complete prostration of the nervous system, with Coma, delirium or great anxiety and restlessness, and occasionally, by an imperfect development of the eruption, or a sudden disappearance of it when formed, symptoms of what is called the putrid Diathesis, manifest themselves, petechiae, vibices, and hemorrhages from various parts of the body. "The pocks, instead of being plump and yellow, are

flat, red, purple or blue, containing blood or an ichorous matter, instead of pus, this kind is always fatal.

Anatomical Characters

"The skin and mucous membranes present the only alterations that are peculiar to this disease. If the pustules are examined closely when five or six days old, two colours will be observed in many of them, a central whitish disc of lymph, surrounded by a circle of yellow, puriform matter; there is in the centre, a vesicle, which is distinct from the pus; the vesicle may be punctured and emptied without letting out any of the pus, or the pus let out without disturbing the contents of the vesicle; by careful dissection the vesicles have been taken out entire. "Traces of pustules are often found after death on the conjunctiva, mucous membranes of the nose, mouth, pharynx, larynx, trachea, and as far as the third division of the bronchi, they are rarely found in the oesophagus, but sometimes they are found in the lower part of the rectum.

Cause

"This disease is caused and propagated by a specific poison. In some years a district or country may be almost entirely free from the disease, and in other years it may attack it with great virulence, almost depopulating the country. "There is no contagion so strong

and sure as that of Variola, and now that acts at so great a distance. It may spread from one room all over a large house, and even to joining houses; it has been known to cross a street and attack the inhabitants, in fact, it is communicated in every way, by inoculation, by breathing a tainted atmosphere, and by the contact or vicinity of fomites, which are said to have the power of retaining the poison for a long time, for months and sometimes for years, if kept from the air. Mr Hawkins mentions some cases where it was caught from the dead body. The foetus in utero has been known to be affected, even when the mother was protected, or at the same time with the mother. Neither sex, age, nor constitution have any power over the disease. One attack generally protects the individual against a second, although cases are on record of two or more attacks. These second or more attacks generally occur during an Epidemic: this disease is Epidemic and sporadic; the epidemics occur at no certain period of the year. Sydenham observed that they are more severe in the middle of winter than in the beginning of Spring. If the disease is caught from a case of distinct Small Pox, it may give rise to the severest form of confluent and vice versa.

Diagnosis

There is no difficulty in making out a case of Small Pox after it has become vesicular and umbilicated, but during the initial fever it is not easily recognized. If there are severe pains in the small of the back, and obstinate vomiting, for which no cause can be assigned it would lead us to suspect the nature of the disease, particularly if it was prevalent in the neighbourhood. It may be mistaken for Measles, but the eruption is less prominent and distinct to the touch, and it soon assumes a crescentic shape, it can also be diagnosed by the subsidence of the initial fever of Small Pox.

Prognosis

The Prognosis in the distinct, when uncomplicated is favourable The Confluent when fully formed is very dangerous, the malignant generally fatal. The prognosis is favourable when the disease proceeds regularly towards desquamation, without serious inflammatory complications and without malignancy, but cases occur, in which the vesicles or pustules suddenly shrink, without any assignable cause, and the patients sink. There is no positive security against dangerous or fatal intercurrent disease, in the confluent untill convalescence is fully established. The unfavourable, though not all of

them necessarily fatal signs are, violent pains in the small of the back, the vomiting persisting after the appearance of the eruption, violent delirium, coma, or convulsions in the first stage, which announce severity, in the advanced stages, except in children, convulsions during the period of the eruption also denote great danger; quantity and confluence of the eruption, the appearance of the pocks over all of the body at once, a bluish or purplish colour of them; petechiae and vibices, with passive hemorrhages, imperfect development of the pustules, or their sudden disappearance when formed without diminution of the other symptoms. If the salivation and swelling of the face abruptly cease, the danger is very great; also when the eruption is copious, and the hands and feet do not swell, hoarseness or loss of the voice, combined with dyspnoea, occurrence of Pneumonia or Pleurisy, and suppression of the urine, or a frequent desire to void it, or involuntary discharges of urine or faeces, and a disposition to the formation of large abscesses in various parts of the body, after the commencement of desquamation. "The disease is more fatal during infancy and old age than at any other period of life. Plethora and debility, are both unfavourable, it is generally fatal to the intemperate. In pregnancy the disease is always dangerous, generally fatal,

abortion is of frequent occurrence. Death may take place at any time; from the attack to the end of the fifth or six week.

Treatment

The treatment was for a long time conducted upon a very disastrous plan. The older physicians adopted the heating and stimulating plan of treatment, they attempted to force out the eruption by excluding the fresh air from the patients, and by a hot regimen, by covering them warmly with bed-clothes, and sometimes giving them stimulants. Sydenham was the first to change the treatment, he revived the Antiphlogistic plan of the Arabian physicians; and that is now universally acknowledged to be the most efficient plan in the cure of this loathsome disease. The two Suttons, Robert of Bury St Edmunds and Daniel, of Ingatestone in Essex, fully established the Antiphlogistic plan, after the introduction of inoculation; they put all of their inoculated patients upon it during the progress of the disorder, and declare that they did not fairly lose a case; Daniel was the most successful of the two. The treatment must be conducted upon general principles. There is no specific treatment in Small Pox. To prevent a copious eruption and lessen the eruptive fever, the Antiphlogistic plan must be strictly adhered

to, Saline cathartics given so as to produce two or three loose stools every day. Sponging the body with cool or warm water, according to the feelings of the patient, and free ventilation over its surface when the temperature is high, also give the neutral mixture or any saline diaphoretic. Cullen advises against the use of purgatives after the eruption has appeared if it is distinct, and if the pustules are confluent the patient should be carefully watched, so as to combat any unfavourable symptoms that may arise. If the pulse is full and strong, and there is evidence of inflammation of any of the important organs, bleeding should be carefully employed, and cups and leeches applied over or near to, the diseased part. Bleeding does not diminish the number of pustules, but tends to debilitate the patient and for that reason, it should be cautiously made use of. If there is wakefulness, restlessness, or tremors if not contraindicated, opiates should be administered in the form of Dover's powder, or Opium, Ipecacuanha and Calomel at bed time, they are usually very serviceable; the warm bath is also very useful. "For vomiting, black-drop or tincture of Opium in small quantities with an effervescent draught, iced carbonic acid water in small draughts, a sinapism over the abdomen, or anodyne enemata. "For cerebral inflammation

the usual treatment; cool drinks of lemonade or iced water are serviceable and gratifying to the patient. If the pustules do not mature properly, strong broth or wine in moderation may be used. In malignant cases, the supporting plan of treatment must be pursued early in the disease, when the pustules are livid, petechiae mixed with them, and typhoid symptoms are present, bark, wine, and opiates are exhibited, but the disorder is generally fatal. During the secondary fever, the patient's bowels must be gently moved by laxatives or by an enema and opiates given once or twice a day, unless contraindicated, they relieve the irritation of the skin. The antiphlogistic regimen must now be discontinued and the system supported by nourishing diet, with wine and cordials. If the pulse be feeble, milk, animal broths, eggs &c must be used in conjunction with other substances to support the strength. When dyspnoea occurs blisters to the throat and chest are the best remedies. To relieve itching of the skin, cold cream, a solution of common salt in warm water, or a liniment of equal parts of olive oil and lime water, is smeared over the skin. Pseudo-membranous exudations in the fauces are treated with nitrate of silver in substance or by a strong solution. To stop the progress of the eruption and prevent pits upon the face, the nitrate of silver is used, the best

plan is to puncture every pustule seperately and apply the caustic or the solution. To succeed, the operation must not be performed later than the third day. The Arabian physicians opened the pustules after suppuration had commenced, pressed out their contents and washed them with warm milk and water, a decoction of poppy heads &c A mode of preventing pits, by the use of the mercurial plaster is recommended by Mr Briquet; if applied early, it is said to produce a resolution of the pustules, or later it prevents suppuration and permanent scars; the system is believed to be benefitted by the operation. The whole face is covered by the plaster, an opening being left for the eyes, nostrils, and mouth respectively; the plaster should be removed after four or five days, as it is likely to produce irritation if longer continued, sometimes salivation occurs from the use of the plaster, but it is said to be more useful than otherwise. Sulphur ointment applied two or three times a day is said to have the same effect. Dr Samuel Jackson of Philadelphia has advantageously used the tincture of Iodine, for the same purpose, he applied it freely and over the whole diseased surface, with a camel's hair pencil. Dr. Cartwright of Natchez covers the faces of his patients with a black mask to exclude the light, he believes that by so doing he prevents the formation of permanent pits on

the face. During the period of desquamation, the patient should use the warm bath occasionally, he should always do so after recovery, before he mixes again with the world. The apartment should be well ventilated, the patient's clothing and bed-clothes frequently changed, and his room should be perfectly clean during the whole course of the disease. In very mild cases nothing but cooling drinks and refrigerant diaphoretics, neutral mixture and keeping the bowels open by gentle laxatives during the fever, be careful to guard the patient from exposure to cold, heating drinks &c

Preventatives, Inoculation, Vaccination.

Inoculation, the introduction of a small quantity of pus, from a Small Pox pustule through the skin, generally producing the Small Pox in a very mild form, and protecting the patient from a second or a severer attack of the disease. The Chinese lay claim to the practice of introducing some scabs into the nostrils, sowing the disorder as they term it, which they say they have been in the habit of doing for centuries. The Brahmins of India are said to have been in the habit of inoculating, for ages past, by stepping a piece of flannel in the virus, and binding it around the body. It was practiced in Turkey long, before it was known to the inhabitants of western Europe. It was introduced into

England by Lady Mary W. Montague, the wife of the British ambassador to the court of Turkey. Her daughter was the first person inoculated in England, afterwards a child of Dr. Keith, and then some felons who were pardoned on having the experiment tried on them, and after a time some of the royal family. The two Suttons, Robert and Daniel, but more particularly the latter, contributed greatly to the success and introduction of the practice. Inoculation was not fully established in England until the middle of the eighteenth century. The most convenient and as effectual a mode as any to inoculate, is to introduce a small quantity of pus, from a pustule into the skin by means of a puncture. The most favourable condition of the system in order to have a mild attack, is that of perfect health, debility or plethora unfavourable. The person who is to undergo the operation, should some time before, confine himself to a mild diet, avoiding stimulants, fatigue, and excess of every kind. The disease thus produced is generally mild, the period of incubation short, the pustules generally distinct, very seldom confluent and very rarely numerous. The secondary fever is slight, or altogether wanting, the pustules, scab, and desquamate very rarely leaving any scars behind. On the third or fourth day, after the operation, a slight

pricking pain is felt in the punctured part; upon examination a hard lump is felt by the finger, and a small vesicle with an inflamed base is seen. On the fifth day, the vesicle is well formed and looks umbilicated, this pustule increases, and at length forms a small tumour. At the end of the seventh day, rigors set in, followed by fever, and on the eighth or ninth day, the variolous eruption appears on various parts of the body. Sometimes a rash like that of scarlet fever, precedes the eruption, it disappears in a day or two. This rash happens oftener in the inoculated than in the other forms of the disease; in the former, it is looked upon as favourable, and in the latter, if the efflorescence is of a dark red colour, it is very unfavourable, and is generally the forerunner of a severe confluent case. The pustules generally pass through the same stages as in the distinct. The original pustule has, in the meantime advanced, and on the tenth or eleventh day, it is surrounded by an irregular areola of inflammation. Occasionally the arm is very much swollen, and matter flows from the sore. Sometimes this form of Variola proves fatal, but if the system is properly trained before the operation, and the patient properly cared for, the deaths are very few, according to Dr. Gregory, not more than one

in five hundred. Although the practice of inoculation protects the individual inoculated, it does not prevent others from taking the disease from him. The inoculated is contagious as well as the natural Small Pox, and for that reason it is not much used.

Vaccination

Vaccination is far superior to Inoculation in most cases, but cases do happen when it is right to inoculate, as when any one is or has been recently exposed to the contagious influence of Variola, for by so doing the inoculated gets the start of the natural disease. Dr Gregory of Edinburgh was in the habit of relating to his class a fact with which a naval surgeon made him acquainted, "The Small Pox broke out among the men of a naval vessel, in a tropical climate, and where no vaccine matter was to be had; the greater part of the men were unprotected, and sixteen of them had the natural disease. Nine or more than one half died, and of three hundred and sixty three who were inoculated, under the disadvantages of a hot climate, and no preparation, not one of them died." It has been known for a long time, that the Cow-pox engrafted upon man is capable of protecting

him from the contagion of Small Pox. Dr Jenner was led to make those experiments, which have proved so successful by the universal belief of the country people in his neighbourhood, "Gloucester county," that any one who had had the Cow-pox, was protected against the ravages of Variola. Although not the first to conceive or practice vaccination, the whole credit of having brought successfully the practice before the world, belongs exclusively to Dr Jenner. He made successful experiments in 1796 but did not publish the results until two years after 1798. The practice from that time spread so rapidly that it became known in this country in 1799 one year after Dr Jenner's publication. During the first year of the present century, it was practised in France, and other parts of the continent of Europe, and from thence spread to India, where indeed it was known to a limited extent long before, and soon it spread over nearly all of the known world. Dr Jenner had to overcome many difficulties before he was satisfied as to the protecting power of vaccination, he found out, that there were some persons who had been affected with sore hands from milking, who were not proof against the Small Pox, he found that the teats of cows

were affected by different kinds of eruption, and it was only by observing closely that he found the true eruption for producing the desired effect upon man. He attributed it to the grease of horses, from the circumstance that the teats were affected during the season of the year, when the grease was common among horses, which disease he supposed was conveyed to the teats of the cows by the hands of those men, who were employed to attend to both animals. It has been since ascertained that this supposition is not correct. Dr Jenner also ascertained that some persons who had had the true complaint were not protected, this he afterwards found out to depend upon the period of the disease in the cow. The thick matter coming from a ripe pustule gives rise to a severer sore, than that from one in its first stage, but it does not produce the desired effect, as is the case in inoculation, for matter taken from a crude variolous pustule is better than that from a ripe one. It is supposed by some that Cow-pox is derived from the contagion of Small Pox, taken from man and modified in the cow. By others that the Small Pox first sprung from the Cow pox or the grease of horses in Arabia,

and that in the course of time by passing through the system of man, it gradually acquired its activity and virulence. Dr Jenner believed that Cow-pox and Small Pox were different forms of the same disease. On the second or third day after the vaccination has been performed, the punctures look red and inflamed, and a small elevation can be felt with the finger. On the fourth or fifth day the vesicle becomes formed, umbilicated, and contains a small quantity of a thin, colourless and transparent liquid. The vesicle gradually increases in magnitude, and by the sixth day a very narrow and red areola surrounds its base; on the seventh day the vesicle is well formed, of a round or oval form and has a shining appearance; on the eighth day the areola spreads and increases, up to the tenth; the vesicle enlarges and measures from, a quarter to one half of an inch across, and from one to two lines in height. The vesicle is more prominent at its circumference than at its centre, and contains from ten to fourteen minute cells, any one of which can be carefully punctured without disturbing the rest, and there is a feeling of itching

and tension at this period. The areola begins to fade on the eleventh day and by the fourteenth, is nearly invisible, it leaves behind some hardness that lasts for three or four days more. A rounded yellowish brown crust has by this time formed over the vesicle, this gradually becomes hard and gets darker and more prominent, and about the twentieth day, it separates from the skin, leaving a circular depressed scar, which is at first red, but gradually fades, becomes white and rises to nearly the level of the skin, the cicatrix is marked by small pits probably corresponding to the cells of the vesicle. About the eighth day a slight fever comes on, corresponding to the secondary fever of Variola; the glands of the axilla are sometimes swollen and painful; these symptoms soon subside, without any unpleasant effects; the febrile symptoms are considered to furnish the desired protection. When it is desired to know if the Cow-pox has run its natural course, the patient is revaccinated four or five days after the first operation, on the other arm or some other convenient place; and if the system has been properly affected, the second vesicle will run its course so rapidly, that

it will overtake, decline and disappear as soon as the first; the second vesicle and its areola will be smaller than the first. If the system has not been properly affected by the first operation, the second pustule will run its natural course, if this happens, it should be tested by a third. This plan was proposed by a Mr. Bryce.

It is better not to vaccinate infants untill the third or fourth month; they ought to be in perfect health, but they should be vaccinated at once and without any preparation if the epidemic is prevalent, or if they have been recently or are likely to be exposed to the variolous contagion. Plethora or debility are unfavourable in adults; extremely hot or cold weather is also very unfavourable, spring and fall are the best seasons of the year for performing the operation. The matter to be employed should be either the lymphe taken from a vesicle on the fourth or fifth day, or the dried scab of the vesicle after it has arrived at maturity. If the scab is kept in a cold place and excluded from the air, it will keep for some months, often for a year. It is easily decomposed by heat, and for that reason

it should be kept in a cool place, and not carried in the pocket for any length of time. For better preservation it is well wrapped up in tin foil and well covered with wax. It has been the general belief that the virus loses its power by passing so frequently through the system of man, but there is no good foundation for that supposition. The matter from the cow is more powerful and gives rise to more inflammation, but if Dr Jenner's opinion is true, that the cow is affected with several kinds of eruption, which may easily be mistaken for the genuine disease, it is certainly safer to vaccinate with the scab from a human subject. The operation is generally performed on that part of the arm near the insertion of the deltoid muscle. The matter is generally softened in water to the consistence of thin mucilage or of pus, from three to twenty incisions are made with the point of a lancet, and the vaccine matter is worked into them. There is another operation which consists in making several minute incisions, crossing each other and applying the matter to them; a dull lancet is best, as it does not draw much blood, which is likely to wash out the

vaccine matter. If the first operation is not successful, it should be repeated several times, occasionally the operator will succeed by delaying the second attempt for some weeks or months. If the scab fails to produce the desired effect, lymph from a vesicle should be tried. I have stated in a former place the mode of Mr. Bryce for testing the genuineness of the disease, care ought to be taken to prevent the vesicle, during its progress, from being broken or impaired in any other way. Revaccination should be practised in every doubtful case, or in cases that have not been exposed to the Small Pox contagion. It should also be performed every ninth or twelfth year, and during an epidemic, and the physician should also vaccinate himself after or before seeing a case.

An

Inaugural Dissertation

On

The Signs of Pregnancy

Submitted to the examination

of the

Provost Regents

and

Faculty of Physic

of the

University of Maryland

For the degree of

Doctor of Medicine

By

Milton Hammond

of Pennsylvania

It being one of the requirements in the medical department of the University of Maryland, that each student should, upon having placed his name upon the list of candidates for graduation, prepare a Thesis for examination. I beg leave to offer the present for your consideration, and have selected for my subject

The Signs of Pregnancy.

This subject is one which should deeply interest every medical man; from its very great importance, inasmuch as he may be called to decide - when his opinion may be asked -. The honor, and in many cases the happiness of a female, may depend upon his decision. The peace of families may rest upon it and the inheritance of property be controlled by it.

It does not therefore confine him to that sphere, where there can be no shame involved; and where conception may be doubtful.

In treating of the subject at present to be considered, I beg leave to enter immediately into the signs by which we are directed, in being called to the decision; rather than attempt to discuss any disputed points or doubtful indications. Sufficient appears to be known to make out our Prognosis with considerable certainty; in combining several signs which may be present even in the earlier stats of Conception

One of the first circumstances which leads a female to believe she is pregnant is the non appearance of the menstrual discharge at the regular period of its return. Yet this though generally occuring may in some cases

not happen; since cases are on record when the catamenial flow is not checked or where these discharges never having occured may commence, and continue at regular periods during uterogestation

Conception may also take place immediately after the female has ceased to give suck, before it has had time to occur. There are many diseases also which check the catamenia: and in which cases conception may take place. The next of which we shall speak is that of morning sickness.

The sympathy shown between the uterus and stomach, is here very strikingly remarked; by the great irritability produced in the latter, which give rise to symptoms of a varied character, producing generally considerable nausea and vomiting upon their attempting to rise.

I may here remark that this may occur immediately after conception. As a case in point. An intelligent Physician of this city, was called to see a young lady, who was suffering from morn-ing sickness, and its accompanying effect. Upon enquiring in respect to her case, he prognosed that she had conceived: and upon making further examination as noticing the breast; he was so well assured of the fact; that he charged her with having had connexion with a man; to which she very frankly acknowledged, stating the only times to have been, once just before and once immediately after the catamenia, three weeks only having elapsed since this period. Subsequent circumstances proved her to have conceived. But the usual time for this sickness to come on is about the sixth week after conception; and to cease about the third month.

This sickness usually lasts from ten minutes to an hour, but there are many instances where the patient may suffer during the whole day. And instances are on record, where it has been necessary to produce abortion in order to the preservation of the life of the Mother. Conception may exist however without this sickness - and sickness very much resembling this, may exist without the female having conceived

The Salivary glands may also be affected, by the irritation produced in conception; this though not of frequent occurrence is still worthy of notice in connexion. It may come on at any period, and continue until the eighth or even the ninth month. It is easily distinguished from ptyalism induced by mercury - by the absence of soreness of

the gums and the peculiar foetor.
The next of which we shall speak are the mammae and their sympathies.
Usually about the second month, the breast appear to change - the female feels an uneasy sensation of fullness, with throbbing and tingling pains in the substance and at the nipple. They have a peculiar feel of knottiness, as they increase in size and firmness, but the coloring of the areola may be even more significant, since the others may all occur under other circumstances.

The areola darkens, varying however with respect to the complexion of the female. The fair may have very little of this color; whilst the brunette may be very strikingly marked. After some time also a milky fluid is secreted, which will often moisten the linen; the changes being perfected at about the fourth month.

The nipple after a time becomes -

prominent as also the surface around (the areola) particularly that ~~of~~ around the base of the nipple, is rendered unequal by the glandular follicles, which may be seen to project from one to two lines. This last sign however, I think can only be relied upon in the first pregnancy; after which time the appearance has become so altered that it is of little or no importance.

From what has been allready said then, the signs of pregnancy are at most doubtful, in the early months, and we should not be warranted in declaring a woman to have conceived unlesp we were able to combine two or three of these signs as existing at the same time. Those which we shall next notice are much more certain; and thus the distinction has been made and termed certain and uncertain.

The uncertain signs continue until the fourth month, and after that period the certain signs commence.

The first to be considered in speaking of the latter class; is the increased size of the abdomen. The gradual growth of the foetus is very much the same in all cases, and thus we are enabled to estimate very nearly the period of pregnancy in every case. During the fourth month the uterus may rise above the symphysis pubis - and thus a rounded tumor may be felt which gradually increases until it fills the whole abdomen. When the uterus has extended up, as in the sixth or seventh month, the umbilicus is pushed out somewhat and more nearly upon a level with the surrounding part, and later in pregnancy it is projected; even beyond the abdomen surrounding. The feels of the distention decrease -

very conclusively, since the uterus or uterine tumor is round, hard and elastic, and preserving its form in every position of the body: although in the upright it is more marked. When ascites is present there is not that firmness; the tumor is not defined, and the fluid always obeys the laws of gravitation, being more prominent on the depending part.

Percussion will also determine between pregnancy and tympanitis. It is true however that the uterus may become distended by air or fluids, and the same signs may be present; the tumor hard, elastic, and circumscribed; then the history of the case must decide or an examination must be made into the contents of the uterus.

The term quickening has been used to express what was supposed to be

the first movements of the foetus, as occuring about the fourth month, and with the erroneous idea that the foetus had only commenced to live; this doc-trine however has exploded, since we have reason to believe that the foetus lives from the time of conception; and also that the movements of the foetus takes place at a much earlier period. The facts in regard to the matter ap-pears to be summed up, in an extract from Dr Fletcher of Edinburg as follows.

"The movement of the foetus, whilst in the uterus, in the cavity of the pelvis, are not perceived, because the uterus is not supplied with common nerves of sensation, and it is surrounded by part equally deficient; but when it emerges from the pelvis, it comes in contact ante-riorly with the abdominal parietes, which are liberally supplied with

with sensitive nerves - and which by contiguity of substance, feel the movement and thus the woman becomes conscious of them?" This also is strengthened by the fact, that the movements only very violent are felt only in front.

In respect to the cervix uteri the changes commence about the fifth month; it then undergoes a change, loses its natural form, and is soft elastic slightly swollen and dilatible. At this period it is shortened but little, at the end of the sixth month, it loses one fourth of its length, at the seventh one half at the eighth three fourth, and at the ninth, the entire neck has disappeared and nothing can be felt except a ring.

A vaginal examination will also enable us to ascertain not only the state of the cervix - but also to decide upon the presence of a foetus by repercussion.

As regards this mode of repercussion the patient should better be in an upright position; or if placed in bed the shoulders and head should be elevated. The operator must then introduce his index finger, and place it upon the cervix uteri. whilst with the other hand he steadies the uterine tumor; then suddenly give a slight jerk upwards, with the finger - he will then feel the body move from his finger and in a few moments return again: this jerk given makes the body rise in the liquor amnii and it will descend by its own weight.

Should a body be distinctly felt, it is most conclusive proof that dead or living a foetus exists in the uterus: since repercussion never produces a like effect in any disease or other condi-tion of the organ=

The period at which this test may be most satisfactory is between the fifth and sixth months of utero gestation.

The next of which we shall speak, are the auscultatory signs; the most certain of all the signs, as indications, much which can only be known by means of the stethescope; and some of the signs, which when once heard, cannot well be mistaken for any others. As to the mode of making this examination, it may be performed by applying the naked ear to the abdomen, or by the use of the stethescope; this latter is to be prefered decidedly, as in most instances the most convenient, and by it we are enabled, more nearly to define and localize sounds.

The manner of performing this operation is if possible to place the patient in bed, upon her

back with her head and shoulders elevated, and the abdomen covered only with a night dress.

In this way all the part of the uterine tumor, are accessable except posteriorly, when the patient may be laid on her side, and thus examined laterally. The operator should always be very particular, at the same time that he mantain a position to himself, that shall be perfectly easy. In order that he may hear only the sounds within the patient, and not be confounded by the throbbing of his own arteries.

The first of these sounds of which we shall speak - is the Uterine Souffle, it is an intermitting whizzing sound varying however, much in intensity, and generally heard over only a part of the uterine surface. It may be compared to the sound

of a sea shell pressed to the ear, or to ~~to~~ that sound made by blowing over the mouth of a bottle, or the sound produced by the action of a pair of bellows. This sound has been said by some to be confined to the situation of the placenta. – But it is at present well known that it may be heard in almost any part particularly by making slight pressure. The time for first hearing this sound is very variable; some authors have stated that they have heard it as early as the tenth week, but the experience of most writers tells us the fourth month is about the average period. It varies also in intensity; at first heard it is feeble, but grows stronger it is very distinct, it may always be heard however before the foetal heart

It is also simultaneous with the pulse of the mother and partakes of all its variations. This sound has as I have remarked been considered by some as belonging or confined to the placenta; but further investigation has proved that it belongs rather to the uterus. Dr E Kennedy believes it to result from the difference between the calibre of the arteries supplying the uterus and the uterine sinuses, that the expanding current of blood rushing from an artery into a larger sinus, gives rise to the sound; just as the passage of blood through a constricted valve of the heart or aorta does to the bruit de souffle" Many other explanations have been offered, but all now tend to prove that it is in the uterus and caused by the circulation

of the blood in that part. These sounds may however be heard when pregnancy does not exist, owing to disease, and therefore we might be mistaken were we to depend upon this sign alone. It may also be heard when you feel an artery, with a stethoscope to any considerable extent, neither will it tell us anything in respect to the life or death of the child

The next and decidedly most important of all the signs, is the pulsation of the foetal heart; this sound is very different from those just described. It consists in a rapid succession of short, regular, double pulsations resembling those of the adult heart, except that they are much weaker and very much more frequent being from one hundred and twenty to one

hundred and forty beat in a minute; the rapidity and force with which the foetal heart may beat depends however upon the vigor of the mother; as also the strength of the pulsations which we can only account for by the intimate sympathy between the mother and child; since the foetal circulation is entirely independent of that of the mother.

The situation in which this foetal pulsation may be heard most distinctly, is very variable, but most generally upon the left side, in the middle of the abdominal region. The extent of surface over which it may be heard is by no means prescribed. The time at which this sound may be heard is from the fourth to the fifth month; perhaps they have been heard before the fourth month, but this is exceedingly rare if

it happen then; and when the sound is not heard until the fifth month, it may be attributed either to the great excess of Liquor amnii; to the thickness of the walls of the abdomen, or to the feebleness of the Foetus. When this sound is heard it is proof so strong in favor of the existance of pregnancy, that it can neither be imitated nor evaded

The only circumstances that could at all embarrass; are the sounds of the heart of the parent and this to the close observer can only be for the moment, inasmuch as the beating of the foetal heart is so much more rapid, and clear than that of the mother. Nor is it conclusive if these sounds be not always heard, that the female is not pregnant, since the child may have

died; or for some reason which we cannot explain, these sounds may not occur for a time, although the foetus be alive

The next to be noticed is the pulsation of the umbilical cord; the position of this cord may in many respects be favorable; as for instance if it be twisted around the neck Body or limb of the foetus, and thus present itself favorably in respect to the anterior or lateral parietes of the uterus. It is also possible to hear the pulsations of the arteries, corresponding to the action of the child's heart, either by the ear or the use of the stethescope; or even by the touch it may be felt rolling under the finger. In some instances however this sound may be a souffle rather than a pulsation. But they may always be distinguished by their corre-

-spondence with the foetal heart rather than that of the mother.

We have now considered all the signs upon which we may rely with any certainty; and yet no two of these signs can be depended upon alone; but combine and we may attain to a correctness we may say indubitable. I beg leave however before I close, to say a few words, in respect to two substances when may be met with in pregnancy and which have only been noticed within the last few years. The first of which I shall speak, is a peculiar principle found upon examination in the urine in pregnancy. This urine upon being permitted to stand for twenty four, or forty eight hours, has been noticed to be covered with a white flaky matter which has received the name of kiestein.

M. Esquirier states that the urine of a pregnant woman, examined in the morning is generally of a pale yellow color and slightly milky, it first reddens and then turns blue; exposed to air a cloudiness is observed from the first day, resembling fine wool, at the same time a white deposite may be seen; upon it being kept for a few days small opaque bodies are seen rising from the bottom and being so deposited upon the surface as entirely to cover it.

This may be seen from the end of the first month, to the end of pregnancy. Some writers have thought this appearance to be constant, and inasmuch as it may be so, it at least deserves a place among the signs, in connexion with this important subject

The mucous membrane of the vagina and labia, has also been noticed to be

of a violet color, depending upon pressure from above, the veins may also become varicosed, and thus this condition will be produced.

In respect to the signs which indicate twin pregnancy it seems not to be necessary to state, inasmuch as the general signs, are the same as those belonging to one foetus; the abdomen however is larger, upon which we may generally depend. The abdomen is somewhat flattened in front, considerable inequality of surface is observed, these are not however to be greatly depended upon. The most decided test, that there are two foetuses in the uterus is the sound of the foetal heart which may generally be heard on either side.

Having thus treated of the signs of pregnancy, and noticed those which have been offered by most modern writers upon the subject. I beg leave respectfully to submit them to your consideration.

A.D. 1850

To the Medical Faculty of the

University of Maryland

this inaugural Essay is respectfully
dedicated and submitted for their
examination by their

obedient Servant
Juliana Bain

The Subject Selected for this thesis is Delirium Tremens - The preference of choice will it is thought be approved of when it is said that the writer has sojourned during a period of two and one half years in the Baltimore Almshouse, in which place Mania a Potu is a prominent disease.

From the Catalogue of the manifold calamities and diseases; the human race is cursed with, no other cause more prolific in its influence can be pointed out than indulgence in strong drinks - This fact is probably more obvious in the United States than in other countries, owing to the wide disparity between the wages of labor and the cost of alcoholic - fluids, thus rendering intoxication, comparatively, a matter of very easy accomplishment -

I may also say that without doubt, nine tenths of the diseases met with in the Balto - Almshouse are caused by - to use the pauper phraseology - "Whiskey - and as this disease when seen in its dread array of symtoms mostly leaves an ineffaceable impression upon a new beginner I have done right in

in choosing this disease for my inaugural Essay

Delirium Tremens

This disease has several other appellations viz- Mania a potu - Delirium Tremifaciens Brain fever etc -

Its prominent symptoms are - great restlessness - tremor - nausea - cold clammy skin - constant watchfulness - a wandering suspicious eye unable of being fixed scarcely a moment upon any one object - incessant talking and mental illusions

Causes

This disease is usually induced by the sudden deprivation of alcoholic stimulus from an individual who may have been for a longer or a shorter period in the habit of indulging himself in strong drink - Opium may act in the same way it is to be remembered however that

that cases caused by the latter drug are not frequently met with.

The sudden abstraction of the customary stimulus is brought about in various ways - With vagrants generally and particularly with those of the Balto. almshouse, it happens somewhat in this wise. About all our wharves, our market houses and other public places are to be found a number of vagabonds who by rendering trifling services are enabled to earn from their casual employers twenty five cents daily - often less - and are thus enabled to acquire the means to obtain food sufficient to support life; but unfortunately owing to our horrible license system they can also procure liquor at one cent a glass in quantities sufficing to keep them from day to day in a constant state of ebriety - By some means or other such as, breaking the law or being found lying in the street he is taken by a policeman to the lockup and there remains all the night and part of the next day, thence he is conveyed to the almshouse - There he can be seen laboring - under the symptoms of this fearfull disease in a period of time varying from twenty four hours to one week in duration - Prisoners sent to jail, soldiers and sailors ordered to join their regiment or ships

as exciting causa

Ship about to march or Sail are for the same reason equally liable - Surgical injuries and Sickness by confining the tippler to his bed and consequently preventing him from resorting to his customary potations can also induce an attack - The disease may also arise from excess of the use of ardent spirits - That is in the person of an irregular drunkard or Sprree - Knowing then we have mania Potu originating from the want of and from the excess or the abuse of Stimulants - It is a matter of importance to ascertain the previous history of the patient because in the latter case there is in almost all cases Gastro enteric inflamation more or less intense -

Some authors consider great mental exercise, masturbation, and inordinate venereal indulgence as exciting causes, this classification is held by the profession in general as probably not correct.

A cursory sketch of the effects of alcohol will perhaps be of some use in tracing out the symptoms of this disease

Its effects when imbibed in small quantities is simple excitement - indicated by increased arterial action - talkativeness

greater brilliancy of the eye - flushed coun=
tenance - exaltation of the muscular System
mental confusion and recklessness of conduct.
Taken in larger quantities, a quasi delirium
is evidently manifest to an observer, the poto=
tions being persevered in, we find the person
in that stage vulgarly called "dead drunk"
This phrase is characterized by entire nervous
prostration. mental oblivion and total loss of
control over the voluntary muscles.

Symptoms -
After a simple debauch of one night the votary
of Bacchus awakes next morning, with head=
ache, loathing of food, mental depression
confusion of ideas, want of tone in the
muscular System and a general feeling of
"mal aise" -
This condition of the System requires but
little other treatment, than rest and abste=
mence - But as D Watson says "a hair from
the dog that bit is usefull we can follow up
his jocular remark by giving valerian capsicum
or some other simple stimulant in broken doses
A protracted debauch develops these Symptoms
in a more aggravated form - The Schlerotica

takes a reddish hue showing capillary engorgement The skin becomes hot and the face flushed, the pulse hard full and frequent, the tongue furred and cracked. The countenance expresses terror and distress - great vigilance and constant restlessness are usual concomitants - If there be slumbering it gives no relief - There is more or less of delirium and incoherence of ideas total loss of apetite and commonly constipation - This train of symtoms is most usually found in the cases originating from excess of liquor and can be arrested and cured, or it may pass into the stage about to be described or into coma and death

In persons who have been drinkers for years and who have drank say from sixteen to thirty two ounces daily where by some cause or other adverted to in the first part of this paper the usual supply is cut of, we find the insomnia - tremor and delirium in a more marked degree - The incoherence of ideas becomes perfect The skin ~~feels~~ cold and clammy to the hand the pulse frequent soft and compressible and the tongue moist - A profuse perspiration breaks out on the slightest ~~Exertion~~ The patient is unable to guide his hand or limbs often missing the object aimed at - mental illusions now begin

now to

now to occur - he fancies he is beset by some evil spirit - that he will be murdered, that he is infested by vermin or that snakes and rats are crawling or running over him while in bed, or that some furious animal is about attacking him - visions of fright full images are seen by him and speak to him, the house where he is seems on fire or he is about drowning numerous other illusions could be mentioned but the above sufficiently well enumerate the more usual ones - All these various events shapes and forms conjured up by his excited imagination he attempts to combat or overcome and if restrained from so doing he will turn upon his friends or nurse and attack them with the greatest fury - When terrified he will entreat and pray in the most heartrending manner for protection or will attempt to break down doors and windows in order to escape his fancied persecutors - Sometimes his delirium is so aggravated that it is dangerous for his attendant to approach, when in this condition it is requisite to use the greatest care and caution to not only prevent him from injuring his nurses but also himself - This occurred in the Belle. Almshouse with two

patients

patients - one of whom died from a fracture of the skull which she inflicted on herself by dashing her head against an iron bedstead - The other cut his throat not however seriously and finally got well - Another broke the iron bar of his window with the rail of a bedstead in order to escape from an illusory murderer and the people who made exertions to capture him recieved several severe knocks - These untoward accidents may be easily obviated by having the nurse and light in the room where the patient is confined and this when it is recollected that the distress and terror are more usual in the night than the day time should always be insisted on - A woman who had from doses of Brandy and opium nearly recovered was again attacked by being forced to sleep in a dark room by herself although she cried and entreated in the most agonising manner not to be kept there without some one being with her - as soon as her request was granted she fell off into a soothing sleep. Their conceits are quite amusing Joe Joyce an notorious vagrant was highly indignant at being confined asserting that he would lose a contract he had made and consequently forfeit several thousand dollars -

Diagnosis - This not very difficult, for when we group the alarmed and restless expression of the countenance, the peculiar character of the sweat - the absence of pain (unless in the Gastric region) and convulsions - and the changing form of the mental illusions we are not a loss to distinguish this disease from Brain fever

Prognosis -
The termination of this disease without the complications as Hypertrophy of the heart - cerebral and gastric inflamation is seldom fatal -

Pathology
It is said autopsy reveals congestion and inflamation of the brain, this is again controverted - Alcohol has been found diffused through the brain and in its ventricles, this fact can probably be accounted for, "By the labored respiration and deficiency of vitality in the organic functions which precede death -
Dr Coates thinks delirium tremens to consist in "a heightened activity of the Sensorium pono the generation of an inordinate vital activity in the brain - Dr Jas. Johnson - Dr Ayres and other

other eminent British practitioners entertain similar views. Dr Klapp has said that the stomach is the seat of the proximate or the essential irritation. Dr Staughton more bold argues that gastritis alone is the actual proximate cause, but Dr Eberle refutes this opinion by observing that "delirium tremens has been cured by emetics and what prudent physicians ever though of administering such remedies in gastric disorders. And Dr Stokes that in several cases of delirium tremens the post mortem showed no signs of gastric inflamation. That the pathology of this disease is involved in doubt and obscurity is a matter beyond doubt I gladly leave this part of my essay and proceed to the treatment

Treatment

Delirium tremens should be treated according to the cause which has induced an attack of the disease. If caused by a want of the stimulus used we must have recourse to Brandy and Opium. Brandy to restore the tone of the nervous system which has necessarily been injured by under exercise and Opium in place of the artificer (to carry out the demonstration) to assist to repair its wounted elasticity. Tinc Opii and acet. Opii

are probably the most convenient forms of administering opium - The usual practice which I have had a chance of seeing is to give the Sph. vini Gallici ℥j - Tinc Opii gtt. XL for the first dose - for the second, third, fourth etc the same quantity of brandy with laudanum in portions of twenty five or thirty drops - until sleep supervenes -

When a case is met with induced by the excess of strong drink - (more particularly in a person not ordinarily in the habit of drinking) brandy though efficacious in cases otherwise caused is absolutely inadmissible - For then we have then almost without exception either Gastritis or Gastro enteritis and consequently its administration would be injurious - The most applicable prescription in this form of the disease would be Opium & Camphor - or Camphor and Stimulant - for instance

Opium grs vj - P. G. Camphor ʒj - to be made into six pills one every two - three or four hours - A more pleasant way of administering the Camphor is to make an emulsion with sugar and gum arabic and then add laudanum or the Black drop in the desired portions

The treatment referred to above is generally applicable only to such cases as are met with in hospitals and charitable institutions — But when as is not seldom the case a person is met with who has been engaged in a debauch which has lasted but from two to seven or eight days and when we find the full bounding pulse and hot skin with epigastric tenderness denoting visceral and cerebral disorder — it is evident that the plan of treatment must be essentially changed — Ice must be applied to the head, cupping or leeching on the abdomen & aperient enemas combined with antispasmodics be cautiously exhibited — Antimonials well known agents in diminishing vascular excitement and reported be useful in the cure of Delirium tremens — Although Dr Stokes of Dublin impresses upon his reader the danger of giving stimulants in Delirium tremens yet we find Dr Gerhard of Philadelphia an advocate for the exhibition of alcohol in almost all the forms of this disease — And it is singular that out of ninety odd cases I have known not even ten of them resulting in inflamation of the alimentary tube —

I am gentlemen your most obedient Servant Julian A Bain

Une dissertation inaugurale

sur

la Phthisie pulmonaire.

présentée à l'examination du prévôt, des régents, et de la

Faculté de Médecine

de

L'Université du Maryland,

pour le

Doctorat en Médecine.

par,

Victor. P. Richard

Baltimore, Md.

De la marche et de la durée de la phthisie pulmonaire.

Si l'on jette un regard sur les relévés nécroscopiques des principales villes de l'Union, la tuberculisation s'y rencontre dans une effrayante proportion. Un sixième des malades, dit le Dr G. Emerson, de Philadelphie succombent à cette affection, et, quelle que soit, du reste, la valeur absolue de ce chiffre, sa fréquence n'est malheureusement que trop bien établie. Cette maladie était connue dès la plus haute antiquité, et certes, ce serait un point curieux et d'un intérêt de philosophie médicale, que de faire dans les temps anciens des recherches comparatives sur ce sujet. Je ne doute pas que les phases diverses de la vie des peuples, de leur civilisation, la diversité du climat, de mœurs, ne révélât des résultats inattendus; mais cette tâche si longue, si difficile surtout par le peu de précision des faits qu'on nous a transmis, ne peut trouver place dans les limites de mon travail.

C'est aux temps modernes seuls que j'emprunterai les éléments de cette thèse. En effet, dans les cinquante dernières années qui viennent de s'écouler, des travaux de la plus haute importance ont paru sur le sujet dont je m'occupe, et, il faut le dire, c'est seulement depuis lors qu'on a établi une limite bien exacte, qu'on a donné un sens précis au mot phthisie. Avant Bayle, Laennec, toute lésion organique était reputée phthisie. Bayle le premier, affecta ce mot à certaines productions morbides du poumon. Laennec rejetant encore les divisions de phthisie tuberculeuse, mélanée, cancereuse, &c, que Bayle avait voulu introduire, établit que le tubercule caractérise essentiellement cette maladie: c'est là encore la doctrine professée de nos jours. La découverte de l'auscultation et de la percussion, les travaux d'anatomie pathologique de Laennec sur ce sujet, jetèrent un singulier jour sur la tuberculisation pulmonaire. A la même époque, Broussais, se plaçant à un autre point de vue, agita aussi vivement cette question, et de nos jours, MM. Andral, Louis, Cruveilhier et autres sont venus enrichir la science de leurs belles recherches sur ce sujet.

Anatomie pathologique. — Le tubercule est une production d'un blanc jaunâtre, de forme ronde ou

vide, de volume variant depuis le grosseur d'un petit pois, jusqu'à celle d'une petite orange. Dur et friable d'abord, il se ramollit ensuite, apparaît comme délayé dans du pus, et après avoir formé des cavernes dans le poumon, il est expectoré par les bronches, ou vidé dans la poitrine, si l'ulcère s'ouvre dans la cavité pleurale. Tel est le tableau succinct des évolutions du tubercule. Mais avant de passer outre, il convient de résoudre quelques questions qui se présentent à nous. Quelle est la forme primitive du tubercule? Laennec regardait comme son premier degré, ces petites granulations grisâtres qui se montrent presque toujours dans les poumons tuberculeux, et que Bayle appelait "tubercules miliaires". M. Andral combattit cette manière de voir: selon lui, les tubercules pourraient parfaitement exister sans avoir été précédés par des granulations grises, et, s'appuyant sur l'analogie, il montra les tubercules se développant de prime abord blancs jaunâtres dans les ganglions lymphatiques, où leur marche pouvait être suivie.

Ayant remarqué l'existence simultanée d'hydatides dans des poumons d'animaux phthisiques, certains observateurs pensèrent que l'hydatide était probablement l'origine du tubercule. Enfin M. Cruveilhier, dans une série d'expériences qui avaient pour but de produire artificiellement des tubercules, chercha à établir qu'ils se déposaient en gouttelettes liquides. Cette dernière origine ne peut être admise, pour la raison bien simple, que l'hydatide est un être organisé, et que le tubercule n'offre aucune trace qui puisse démontrer son existence. La nature, le mode d'accroissement du tubercule, ont à peine été effleurés par Laennec; cependant il tend à croire que ce sont des produits vivants qui se développent par intussusception. Comme M. Andral, je suis porté à croire qu'ils se développent par agrégation, selon les lois des corps inorganiques. Enfin quel est le siège de ces corps? Cette question, vivement agitée par Broussais au profit de sa théorie, donna lieu à des grandes controverses. Selon Broussais, la sécrétion de la matière tuberculeuse s'opérait toujours dans les ganglions et vaisseaux lymphatiques du poumon. Il se basait,

pour soutenir ce fait, sur ce que les phthisiques étaient fort souvent scrofuleux, que c'était dans les ganglions lymphatiques que se développaient le plus ordinairement les tubercules des autres régions; enfin, que dans les poumons de phthisiques on remarquait toujours les vaisseaux lymphatiques gorgés de matière tuberculeuse. Ces mêmes considérations lui fournirent matière à déterminer la nature de la maladie: nous aurons à revenir plus tard sur ce point. Quant au fait d'anatomie pathologique, il est vrai que fort souvent les vaisseaux lymphatiques sont engorgés, mais ils sont loin de l'être toujours. Ces mêmes ganglions du poumon ne sont admis que par analogie, et M. Andral les conteste. On admet plus généralement aujourd'hui que les tubercules se développent dans la trame vasculaire du poumon. Une autre manière de voir leur assignait pour siège les vésicules bronchiques: s'il en était ainsi, pourquoi la matière tuberculeuse ne serait-elle pas plutôt expectorée? Dans l'état actuel de la science, je ne pense pas que cette question soit complétement vidée.

Toutes ces longues considérations nous mettent à même d'apprécier le vague qui règne encore sur certaines parties de l'anatomie pathologique de cette affection. Les tubercules affectent de préférence le sommet des des poumons; on les rencontre le plus généralement dans l'espace compris entre la clavicule et la quatrième côte: il n'est pas rare de les voir se produire à la partie postérieure. Le poumon droit est le plus ordinairement attaqué. Tantôt ils apparaissent isolés, tantôt ils sont disposés par groupes qui se joignent, se ramollissent, et forment des cavernes. Les tubercules sont le plus souvent superficiels; assez fréquemment pourtant il y a au dessus d'eux une lame de poumon sain. On voit quelquefois la matière tuberculeuse infiltrée en masse, parsemée çà et là de tubercules jaunes. Enfin, après avoir éprouvé des transformations diverses de volume, selon le mode que nous avons signalé plus haut, les tubercules, arrivés à une certaine époque, se ramollissent; jusque-là ils étaient dits crus. La théorie de ce ramollissement

qui est due à M. Lombard (de Genève) me paraît très-ingénieuse. Suivant lui, la matière tuberculeuse agit sur le tissu pulmonaire à la manière d'un corps étranger, produit une inflammation suppurative qui infiltre chaque molécule tuberculeuse, la délaye, la rend propre à être expectorée. Cette manière de voir, qui paraît si simple, est pourtant contrariée par cette observation que, le plus souvent, le tubercule se ramollit à son centre. Dans ces cas, plus rares qu'on ne pense, dit M. Lombard, ce sont des petits tubercules multiples, dont les interstices entrent en suppuration. Soumis à l'analyse, le tubercule a présenté 98.15 de matière animale, 1.85 de matière saline. Quelque fois la matière animale dont il se compose est absorbée, et les sels se déposent. La réunion de ces divers produits calcaires forme un corps dur qui s'enkyste, et peut rester ainsi longtemps sans effet appréciable. Nous arrivons à une partie fort importante de l'histoire du tubercule, et pendant laquelle souvent il est seulement possible de les diagnostiquer d'une manière positive. La matière tuberculeuse ramollie infiltre les tissus qui l'environnent, les détruit, et, au bout d'un certain temps, elle est expectorée, alors elle laisse à la place un ulcère, une caverne; le plus souvent celle-ci communique avec les bronches seulement, et si elle est petite, elle représente assez bien l'exagération d'un de leurs tuyaux. Mais lorsque de grandes masses se sont ramollies, lorsque surtout d'autres plus rapprochées sont venues se joindre à elles, la caverne est loin de présenter la regularité et l'apparence que nous signalions; elle est anfractueuse, pleine de sinuosités; on y rencontre des saillies formées par des lambeaux de poumon sain. Il peut arriver que ce prolongement ne tienne plus à l'organe que par une très-petite languette. Les rameaux bronchiques sont détruits, et s'abouchent à plein tuyau dans la caverne. Quant aux vaisseaux, ils sont le plus souvent refoulés contre les parois, où on les voit ramper; dans quelques cas rares, ils forment des jetés d'un bord à l'autre de la caverne; alors ils sont généralement oblitérés, et si, par exception, ils ne l'étaient pas, une hémorrhagie, qui peut être fort grave, mortelle même,

est imminente. Les parois de la caverne sont, à l'origine, tapissées par une pseudomembrane, qui se développe par plaques isolées; plus tard, sous celle-ci apparaît une sorte de tissu cartilagineux, se continuant avec les bronches, membrane qui peut se rétrécir de plus en plus, et opérer la cicatrisation de la caverne. A l'entour, le tissu pulmonaire est généralement infiltré de matière tuberculeuse, tantôt en nappe, tantôt en masses isolées, quelquefois formant des zones qui interceptent des espaces sains. Une chose digne de remarque, c'est que sur tous les poumons qu'il a examinés, sauf trois, M. Louis a rencontré tous les degrés de tuberculisation réunis. Ils affectent plus particulièrement les parties que nous avons signalées comme lieu d'élection des tubercules; ils sont tantôt superficiels, tantôt profonds; s'ils sont en contact avec la plèvre, celle-ci s'enflamme, se transforme quelquefois en plaques cartilaginiformes; d'autres fois s'ulcère, et il se produit un pneumothorax. Si la caverne est recouverte d'une lame de poumon sain, qu'elle soit surtout petite et isolée, elle peut donner lieu à des méprises importantes de diagnostic, que nous aurons occasion de signaler; on en rencontre rarement au centre du poumon. La pleurésie, la pneumonie, la bronchite, accompagnent si souvent les tubercules, qu'on avait vu entre ces affections un rapport de cause à effet: aussi n'est-il pas rare de rencontrer sur des poumons de phthisiques toutes ces inflammations à des degrés divers. Ces altérations méritent le plus grand soin pour aider à l'appréciation des symptômes; mais il est arrivé maintes fois que des tubercules ont été rencontrés chez des sujets morts de toute autre maladie, sans qu'il y eut eu jamais phlegmasie pulmonaire.

Lésions annexes. — Les altérations dont nous allons offrir un aperçu rapide, se rattachent si intimement à la phthisie par leur fréquence dans cette affection, que nous n'avons pas cru devoir les passer sous silence. De tout temps on avait signalé la coïncidence des ulcérations du

larynx avec la phthisie tuberculeuse; M. Louis a constaté des lésions de même nature, qui s'observaient sur l'épiglotte et sur la trachée. Tantôt la membrane muqueuse est simplement rougie, indurée, friable; tantôt elle est ulcérée superficiellement, et au dessous d'elle on remarque le tissu cellulaire hypertrophié, comme lardacé; souvent l'ulcération est plus profonde, et comprend les tissus cartilagineux qui sont détruits. M. Louis pense que les crachats irritants des phthisiques jouent un grand rôle dans la production de ces désordres. Le cœur présente généralement un degré d'émaciation assez notable; ses cavités sont souvent rétrécies; serait-ce par appauvrissement des liquides? Enfin l'estomac est le siège de lésions bien importantes, dont l'origine est vivement controversée. Les mêmes degrés d'altérations que nous avons signalés au larynx se rencontrent ici: tantôt la membrane est rouge, friable; elle offre l'aspect mamelonné; tantôt elle est ramollie, comme infiltrée, se déchirant sans effort. On y observe aussi des ulcérations plus ou moins profondes, qui peuvent aller, quoique rarement, jusqu'à perforer l'estomac! Est-ce là un résultat d'inflammation? Cet état est-il provoqué par une accumulation insolite de bile? Des raisons nombreuses ont été allèguées de part et d'autre. L'altération du foie, dans la phthisie, a été signalée de tout temps; le volume de cet organe s'accroît d'une manière considérable, et devient d'aspect jaunâtre, poisseux au touché; l'instrument tranchant qui le divise s'imprègne d'une graisse assez liquide. Enfin l'intestin grêle, et le gros intestin, sont souvent, à des époques de la maladie difficiles à préciser, le siège d'altérations de nature inflammatoire: rougeur, induration, ramollissement, ulcération; mais ici aussi l'élément tuberculeux vient se surajouter au travail phlegmasique, et il n'est pas rare de rencontrer des tubercules sous la membrane muqueuse, au pourtour des ulcères. Le système lymphatique est presque toujours envahi, plus ou moins, par la matière tuberculeuse.

En terminant cet article, j'éprouve le besoin de faire quelques réflexions sur la tendance des recherches faites jusqu'à ce jour. L'anatomie pathologique des organes en a eu la plus grande part, et je suis loin de m'en plaindre, car cet étude a jeté la plus vive lumière sur beaucoup de points de cette maladie jadis si obscure; elle nous a initié à son mécanisme, nous l'a fait suivre pas à pas, et nous a permis de reconnaître avec assez de précision ses evolutions diverses. Certes, ce sont là de beaux resultats, et je me plais à reconnaître combien le diagnostic en a retiré d'avantages; mais ce n'était-là, à mon sens, qu'une face de la question: le tubercule était-il donc la lésion unique primitive? N'existait-il pas dans l'organisme une cause de sa production? n'était-il pas possible d'apprécier cette cause? Ne devait-on pas du moins chercher à le faire?

Ces questions, qui me paraissent de la plus haute importance, et qui ont été resolues affirmativement par un grand nombre d'auteurs recommandables, n'ont pas, il me semble, suffisamment attiré leur attention sur les alterations des liquides. Ces états pathologiques ont été admis sans démonstration anatomique: c'est là une grande lacune, qui, je ne doute pas, a retardé singulièrement l'intelligence de points importants de la phthisie. Dans ces derniers temps, quelques médecins ont pris ces recherches en science considération. Esperons que cette nouvelle tendance, fournira a cette partie de la science des elements nouveaux dont elle a grand besoin.

Symptomatologie

Avant d'essayer de tracer un tableau de l'affection qui nous occupe, il me semble qu'il ne serait pas sans importance d'examiner un à un les symptômes saillants qui la caractérisent: cet aperçu rapide, en fixant la valeur absolue de chacun d'eux, servira à l'intelligence de l'histoire synthétique que nous aurons à en faire plus tard. Pour mettre quelque clarté dans cette étude, nous

divisons les signes de la phthisie en trois grandes classes : signes physiques, signes pathologiques, ou rationnels, et complications.

Signes physiques. — Pour bien comprendre la valeur et la production de ces signes, il est bon de se rappeler les transformations diverses du tubercule dans les poumons. Nous avons distingué trois périodes bien tranchées dans son évolution complète : dans la première, il est solide, cru, puis il se ramollit, enfin il disparaît et laisse une caverne. Il est aisé de voir que les bruits, les sons fournis par l'auscultation et par la percussion, devront être modifiés par ces changements ; c'est là ce que nous allons examiner. A l'état de crudité, si les tubercules sont superficiels et assez nombreux, la percussion donne un son plus mat qu'à l'état ordinaire ; si une couche de poumon sain est interposée, cette différence est imparfaitement sentie. L'auscultation n'est guère plus fidèle à cette époque ; les tubercules déposés, comme nous l'avons vu, dans les interstices des vésicules pulmonaires, les compriment, et rendent l'entrée de l'air difficile, peuvent même l'empêcher : dans le premier cas, l'expiration est plus longue ; dans le second, le murmure vésiculaire n'existe plus, il y a un souffle tubaire ; mais ceci doit s'entendre pour les tubercules superficiels. Mais si une lame de poumon sain les sépare de l'oreille, ces caractères perdent beaucoup de leur exactitude, d'autant que la matière tuberculeuse, n'étant pas très-homogène, n'est pas excellent conducteur du son. Et l'on a pris souvent, comme signe de tubercules crus, un souffle qu'on a dit expiration prolongée, tandis qu'il était le plus souvent produit par une caverne vide. Ce qu'on a nommé aussi à cette époque "the sub-crepitant rhonchus" est produit par le ramollissement isolé de quelques tubercules ; l'engorgement catarrhal de petits tubes bronchiques pourrait en imposer souvent pour ce bruit. Lorsque le tubercule ramolli est mêlé à des matières purulentes, il offre une consistance fluide ; l'air, en le traversant, doit nécessairement produire des râles bulleux, comme

il les produit dans la pneumonie, et ici seulement, la forme, la grandeur de la cavité imprimant à ces râles des caractères particuliers : alors, on leur donne le nom de gargouillement, de râle caverneux ; il peut même arriver que les cavernes étant plus petites, produisent des râles muqueux. La percussion rend toujours un son mat tant que la caverne est pleine. Plus tard, la caverne se vide : alors, l'air arrivant dans de grandes cavités doit produire de grands retentissements : c'est le souffle tubaire exagéré, il est dit caverneux. La voix du malade retentit à l'oreille de l'observateur, il y a de la pectoriloquie ; le phénomène est d'autant plus parfait que la caverne est plus superficielle. Il ne faut pas oublier que tous ces phénomènes que nous venons de parcourir, peuvent disparaître d'un moment à l'autre ; car les cavernes sont continuellement à se remplir et vider avec une grande promptitude : c'est une particularité dont il faut tenir compte. Lorsque ces cavernes sont très-considérables, elles rendent un son métallique moins fort ; il est vrai, que dans le pneumothorax, uniquement parce que la cavité n'est pas aussi considérable : tous ces signes, clairs et faciles quand les cavernes sont superficielles, nous arrivent modifiés par le murmure vésiculaire, lorsqu'elles sont profondes et recouvertes par des poumons. Tout cela nous montre, qu'à vrai dire, le stéthoscope ne nous donne pas de signes pathognomoniques, que souvent ils peuvent ils peuvent être très-obscurs, et qu'il est alors fort utile de chercher des indications ailleurs.

Signes pathologiques. — La toux est un signe fort important dans la maladie qui nous occupe, elle est presque constante, et affecte surtout une marche remarquable au début ; souvent, sans cause connue, les malades sont pris d'une petite toux sèche, qui, rare d'abord et presque inaperçue, devient de jour en jour plus active, et finit par les fatiguer beaucoup. Tantôt elle persiste longtemps

ainsi, quelquefois elle s'amende, disparaît, pour revenir au moindre prétexte. Ces hésitations peuvent durer longtemps, jusqu'à ce qu'enfin vienne un jour où, prenant racine d'une manière plus profonde, elle ne quitte plus le malade. On a vu ce symptôme manquer tout-à-fait: ceci s'observe surtout, d'après M. Andral, dans les cas où la phthisie se complique d'autres affections: il cite l'exemple d'un jeune homme qui succombe à une inflammation intestinale. Pendant la vie les tubercules avaient été soupçonnés, la toux avait manqué: peut-il en être ainsi quand le tubercule accomplit toutes ses évolutions? Je ne le pense pas.

Relativement à leur quantité, les crachats m'ont paru suivre les phases de la toux à l'origine, alors qu'elle est purement symptomatique de l'affection "bronchique" tuberculeuse, ou qu'une irritation engoue les bronches; les crachats sont complétement séreux, et quelquefois assez abondants; plus tard ils deviennent séro-muqueux. Il est encore assez aisé alors de voir qu'ils sont produits par l'affection catarrhale, ils sont spumeux, âcres, légers. Lorsque la nature tuberculeuse ramollie est expectorée ils deviennent remarquables; le plus souvent leur augmentation est subite; ils sont blanc-jaunâtre, comme striés, pelotonnés, purulents, pesants, non âcres; ils peuvent être mêlés à des lambeaux de pseudomembrane, à de la matière tuberculeuse même; ils sont alors bien plus caractéristiques; ils se suspendent quelquefois brusquement, pour revenir quelque temps après. Peut-on diagnostiquer une phthisie à l'inspection des crachats? Certes l'on s'exposerait à de graves erreurs si l'on se contentait de ce signe, et je ne doute pas que de cette façon on n'ait souvent pris pour phthisiques des malades qui n'avaient qu'un catarrh. Je ne sache pas que la chimie organique nous ait donné les moyens de distinguer ces produits de sécrétion dans les deux cas. Il peut arriver, et M. Andral en cite quelques exemples dans sa clinique médicale, que les malades expectorent des concrétions salines dont nous avons déjà parlé.

L'hémoptysie précède très-fréquemment les tubercules, ou du moins est un des premiers signes qui les révèlent. Souvent il arrive qu'au milieu d'une santé florissante, il survient un crachement de sang qu'on ne peut rapporter à rien; ce phénomène peut ainsi se reproduire à diverses reprises, sans que la santé du malade paraisse sensiblement altérée; mais bientôt la toux et tout le cortège des symptômes dont nous avons à tracer le tableau viennent donner ces hémoptysies un effrayant cachet de gravité. Ce signe a paru d'une telle importance à M. Louis, qu'il lui suffit pour prononcer sur la maladie. Cette manière de voir m'a paru trop absolue: il n'est pas rare de voir certains états pléthoriques déterminer des hémoptysies qu'une saignée fait disparaître, sans qu'il y ait apparence de travail tuberculisateur. Il n'en est pas moins vrai que ce symptôme a la plus grande valeur, surtout quand on le met en regard de ceux qui l'accompagnent. Entre ici M. Lombard a essayé de tracer le mécanisme de ces hémoptysies. Suivant lui les tubercules en se développant irritent, ulcèrent les vésicules bronchiques, et chaque hémoptysie indique d'une manière assez précise un surcroît d'activité dans le travail de tuberculisation. Je ne sais pas jusqu'à quel point cette explication doit être acceptée. Il est rare que la dyspnée soit bien considérable dans la phthisie, et il était facile de le prévoir, si l'on considère que les tubercules envahissent rarement de prime abord les poumons de manière à empêcher la pénétration de l'air dans la plus grande partie de leur tissu; il se rencontre des cas, cependant, dans lesquels des tubercules miliaires se développent rapidement et en très grand nombre dans les deux poumons, et qui font succomber le malade promptement au milieu d'une agitation d'une dyspnée extrême (chinique du Prof. Powers). Lorsque les tubercules se propagent graduellement, il se produit des pneumonies partielles qui indurent les tissus, et vient un moment où le tissu pulmonaire est imperméable dans une grande étendue. Alors, comme dans toutes les maladies chroniques lentement-

arrivées, l'organe a été habitué de longue main à cette insuffisance d'hématose, qui, brusquement produite, l'aurait infailliblement révolté. Voyez aussi ce qui s'observe lorsqu'un état aigu vient troubler le cours d'une phthisie régulière, la dyspnée devient considérable, et, en général, alors elle donne la mesure des lésions qui viennent surajouter ainsi brusquement aux tubercules.

La douleur est aussi un phénomène assez médiocre, dont le malade se préoccupe rarement. Je ne sais même pas s'il est bien établi qu'elle existe dans les cas de tubercules sans complications mais il suffit, ce qui est fréquent, que les plèvres s'enflamment pour que ce phénomène se prononce. Une des raisons qui expliquent la rareté de ce symptôme, c'est, suivant M. Louis, les mouvements très-restreints des plèvres au sommet des poumons, là précisément où siège de préférence la maladie.

La fièvre est un signe précieux dans la phthisie, précieux, parce qu'à lui seul il donne souvent l'éveil sur un état anormal que rien n'aurait fait soupçonner. Ainsi, à la suite d'un rhume assez léger, auquel les malades ont à peine pris garde, ou bien après une hémoptysie souvent peu considérable, on voit survenir un peu de fièvre; cet état fébrile, faible d'abord, persiste sans qu'on puisse bien se rendre compte de la cause qui l'entretient; il est rebelle à toute médication; le soir il s'exaspère, les malades éprouvent un frisson bientôt suivi d'une chaleur âcre, mordicante, et des sueurs visqueuses, souvent assez fétides, couvrent le tronc, les membres supérieurs, le cou, et quelquefois seulement quelques-unes de ces organes; bientôt les malades dépérissent de jour en jour. Un état pareil a une grande valeur diagnostique.

Est-il possible de fixer d'une manière précise le rapport d'origine qui existe entre la fièvre et l'affection tuberculeuse? Je ne le pense pas? Des tubercules déjà formés entretenant une irritation continuelle sur la membrane muqueuse des bronches, la produiraient-ils? Ou bien serait-ce

cette même irritation qui, primitivement, tiendrait la fièvre sous sa dépendance, et lui ferait ainsi précéder le tubercule ? Dans certains cas, cet état fébrile ne serait-il pas toute l'expression, non traduite encore, dans les organnes, de la diathèse tuberculeuse ? Toutes ces manières de voir me semblent possibles. Quoi qu'il en soit, la fièvre joue, dans la phthisie, un rôle fort important : à mesure qu'on avance dans cette affection, on la voit devenir de jour en jour plus persistante ; souvent, cependant, elle sera faible, aura des intermittences, les moindres causes l'augmenteront d'une manière sensible, et elle sera le reflet assez exact des accidents, des complications qui surviennent si souvent dans cette maladie.

L'amaigrissement ne paraît pas toujours dans les premières périodes : il n'est pas rare de rencontrer de phthisiques qui ont des cavernes considérables, et qui n'ont pas maigri d'une manière sensible. Ce phénomène me paraît être en grande partie sous l'influence de l'état des voies gastriques : aussi, quand l'estomac devient malade, l'appétit se perd, et l'amaigrissement est prompte. Nous y reviendrons.

Complications. - Les affections qui viennent se joindre au tubercules pulmonaires, sont d'une telle importance, si fréquentes, que nous serions coupables de ne pas en parler. Souvent leurs symptômes sont longtemps seuls appréciables, et elles masquent alors la marche de la maladie tuberculeuse. Nous examinerons tour à tour les complications des voies aériennes, et celles du tube digestif et de ses annexes.

Il est très commun de rencontrer, dans la phthisie, des affections du larynx : tantôt elles semblent marquer le début de cette maladie, tantôt, au contraire, elles ne se développent que plus tard. Les symptômes qui nous révèlent ces lésions sont les suivants : toux assez fréquente, trouble de la voix.

Il arrive, en effet, alors même que la membrane muqueuse est simplement bouroufflée, que la voix éprouve de grandes modifications dans son timbre. Si les ligaments thyro-aryténoïdiens sont ulcérés, détruits, il y a aphonie.

La douleur est un symptôme bien infidèle : là, elle est presque nulle, elle l'est aussi dans les lésions de l'épiglotte et de la trachée, lésions que nous avons déjà signalées dans une autre partie de ce travail ; ne produisant par elles-mêmes presque aucune altération de la voix, elles ne peuvent être que soupçonnées pendant la vie. On comprendra combien il est important de tenir compte de cette affection, si l'on réfléchit que, presque jamais, elle n'existe seule que par le fait de l'existence d'une phthisie laryngée. On est presque autorisé à diagnostiquer des tubercules dans le poumon, alors même que rien ne les indiquerait.

Le parenchyme pulmonaire, et son enveloppe pleurale, sont aussi très-fréquemment le siège de lésions qui méritent toute l'attention du médecin ; elles sont importantes sous le double rapport de leur gravité et de leur fréquence. Presque toujours elles précèdent le développement des tubercules, et même de cet enchaînement que Broussais déduisait la nature de la maladie. Mais, sans vouloir anticiper sur cette question, qu'il nous suffise de savoir que, lorsqu'une inflammation du poumon est passée à l'état chronique, qu'elle résiste à tous les moyens de l'art, que le malade maigrit, le soupçon de tubercules est parfaitement légitime. Mais il arrive souvent que ces affections surviennent alors que le diagnostic de la phthisie a déjà pu être établi ; il n'est pas rare même de les observer alors à l'état aigu : c'est là, comme nous le verrons plus tard, une complication fâcheuse, et qui hâte singulièrement la maladie.

Les affections des voies gastriques se développent, tantôt primitivement, tantôt dans des époques

plus avancées de la phthisie. Quelle que soit leur époque d'apparition, elles impriment à la maladie un cachet spécial : elles débutent quelquefois d'une manière lente ; les fonctions digestives se troublent ; l'appétit se perd ; la langue est sale, couverte d'un enduit jaunâtre. De temps à autre il survient des nausées, des vomissements ; une douleur sourde se fait sentir à la région épigastrique. Il n'est pas rare de voir, quelque temps après, se déclarer une diarrhée assez active ; le malade dépérit. Il peut arriver que l'affection s'annonce par des symptômes aigus : douleur épigastrique assez vive ; pouls élevé ; langue sale au milieu, rouge à la pointe et sur ses bords ; nausées ; vomissements fréquents. Si elle subsiste ainsi, elle fait des progrès rapides ; le plus souvent elle revêt la forme chronique dont nous avons déjà parlé. Alors on voit les phénomènes gastriques dominer l'état du malade, et masquer pour un temps le travail de tuberculisation. Puis surviennent la toux, les hémoptysies et les signes de phthisie. Mais, dans beaucoup de cas, les lésions gastro-intestinales viennent compliquer un travail de tuberculisation déjà établi ; la diarrhée, les vomissements, l'état de la langue, sont les symptômes culminants, et dont nous avons déjà parlé. Lorsqu'il en est ainsi, la maladie a promptement une terminaison funeste, surtout si l'affection concomitante se déclare avec violence. Quant à la lésion du foie, qui est si commune, celle de la rate, des reins, elles ne peuvent guère être que soupçonnées ; la palpation seule peut jeter quelque jour sur leur existence. On a signalé les fistules à l'anus comme venant s'ajouter aux symptômes de la phthisie : sur ce symptôme, je n'en puis rien dire.

Il résulte de l'examen analytique que nous venons de faire des phénomènes principaux de la phthisie, qu'il n'en existe pas à vrai dire pouvant caractériser cette maladie d'une manière,

irrécusable, et qu'il faut demander à des groupes de symptômes mis en regard les uns des autres ce qu'un seul ne peut nous donner. Les auteurs qui ont écrit sur cette matière ont admis deux périodes dans la symptomatologie tuberculeuse. Cette distinction est-elle fondée d'une manière absolue? Non certes; car lorsque l'affection commence, qu'elle est dite au premier degré, il arrive toujours qu'il y a çà et là des points isolés dans lesquels le travail de tuberculisation est plus avancé: nous l'admettrons cependant; parce qu'elle caractérise assez bien les changements qui se passent dans les grandes masses tuberculeuses, et les modifications qu'elles opèrent dans l'état général de l'organisme, ayant soin, du reste, de réserver l'irrégularité de production des tubercules.

Première période. — Il est fort ordinaire de voir cette maladie débuter par une toux persistante, dont le plus souvent on ignore la cause: quelques malades la rapportent à un refroidissement. Toujours est-il que cette toux, qui à l'origine était si légère qu'elle incommodait à peine, devient fatiguante à la longue; elle résiste aux moyens qu'on emploie contre elle. Bientôt arrive une hémoptysie: il n'est pas rare de voir ce symptôme apparaître le premier. Dire toutes les phases que peuvent subir, et la toux et l'hémoptysie, serait chose difficile. Tantôt ces symptômes cessent pendant longtemps, tantôt, au contraire, ils appellent promptement de nouveaux phénomènes qui viennent jeter du jour sur la maladie: alors si l'on percute soit la partie antérieure et sous-clavière de la poitrine, soit la partie postérieure correspondante, on obtient quelquefois un son plus mat; l'auscultation fait percevoir des sons crépitants, quelques râles bulleux, des expirations prolongées: on note souvent la couleur jaune rougeâtre d'une ou des deux pommettes tranchant sur les tons tristes du visage; la sclérotique prend quelquefois une teinte azurée. On observe une petite fièvre avec redoublement, et frissons le soir; la nuit

est marquée par des sueurs visqueuses du tronc et de la face. Dans tout autre moment la peau est sèche, aride, d'une chaleur mordicante; il peut exister quelques douleurs entre les épaules: si l'appétit se conserve, l'embonpoint ne diminue pas d'une manière bien sensible; mais, si l'estomac s'irrite, si la diarrhée se déclare, l'amaigrissement ne tarde pas à se prononcer: le malade atteint promptement la deuxième période. Quelquefois ce préambule manque, ou tout au moins passe inaperçu: la maladie nous apparaît de prime abord au second degré.

Deuxième période. – Désormais la toux prend un caractère plus déterminé, plus persistant; les crachats deviennent opaques, blancs, striés, non aérés, sont quelquefois très copieux, puis diminuent brusquement; les hémoptysies sont rares et peu abondantes, sauf des cas exceptionnels (rupture d'artères dans une caverne). Les signes fournis par la percussion et l'auscultation démontrent des cavernes plus ou moins considérables, alternativement pleines et vides; les sueurs sont copieuses, fétides; les selles, les vomissements se répètent à de courts intervalles; la dyspnée se fait quelquefois sentir, et si les affections aiguës ne viennent pas se jeter à l'encontre, la maladie arrive ainsi au dernier degré de marasme; les poumons se couvrent de cavernes, s'hépatisent dans toute leur étendue; la dyspnée devient extrême, le malade s'éteint, conservant presque toujours l'intelligence assez nette, et souvent jusqu'à la fin a l'espoir d'une guérison prochaine. Mais il arrive aussi que des complications aiguës, soit de la poitrine, soit de l'abdomen, viennent provoquer un brusque dénoûment; il est même fort commun de voir des symptômes aigus se développer dans les phthisies les plus lentes vers les derniers jours.

Marche, durée, et terminaison.

Il n'est point de maladie qui offre, dans sa marche et dans sa durée des formes aussi diverses et des événements aussi imprévus. Aussi les observateurs qui ont cherché à établir quelques données positives à cet égard, ont-ils eu bien soin de signaler la valeur relative des chiffres qu'ils offraient? MM. Louis et Andral fixent la durée moyenne de la maladie de un mois à deux ans: combien de cas particuliers échappent à cette loi. La phthisie pulmonaire peut affecter une marche chronique, et se développer ainsi sourdement, avec lenteur. Il n'est pas rare de lui voir offrir dans des cas des intermittences très-longues. Les symptômes, auparavant bien manifestes, disparaissent jusqu'à ce que, sous l'influence de causes fort souvent peu appréciables, on les voit renaître. Ces amendements et ces intermittences peuvent aussi se répéter souvent jusqu'à ce qu'enfin la maladie prenne racine d'une manière définitive, et marche ordinairement vers une terminaison funeste. Le phthisique se voit mourir, et la mort lui arrive au milieu de cet effrayant cortège de symptômes que nous avons signalé plus haut: marasme, dyspnée, diarrhée, et sueurs colliquatives: il s'éteint asphyxié, pour ainsi dire, par les crachats que depuis quelque temps il n'a plus la force d'expectorer. C'est là la marche complétement régulière de la phthisie avec ses évolutions, ses secondescences: mais combien de fois des affections aiguës intercurrentes ne viennent-elles pas se jeter à l'encontre, et terminer brusquement une maladie qu'on espérait voir se prolonger longtemps encore. Souvent il arrive que l'affection tuberculeuse est latente, et que des inflammations pulmonaires ou abdominales viennent démasquer sa sourde existence; mais il est des formes de phthisies bien autrement remarquables et rapides. Des tubercules nombreux peuvent se développer simultanément et en quantité innombrable: en très peu de temps le malade meurt asphyxié. Il peut arriver aussi que des malades

succombent à une affection tout à fait étrangère à celle qui nous occupe, et que l'autopsie révèle l'existence d'une maladie tuberculeuse, que rien n'avait pu faire soupçonner pendant la vie.

Bien des "influences" circonstances peuvent influer sur la marche de la phthisie: de tout temps on a signalé la grossesse comme imprimant un temps d'arrêt aux tubercules; les observations de MM. MM. Louis et Andral semblent en désaccord avec cette manière de voir. La phthisie se termine-t-elle toujours d'une manière fatale? question importante que bien des médecins résoudraient par l'affirmative. Je ne pense pas cependant, qu'après les observations de la veuve de M. Andral et autres, on puisse nier qu'il existe des cas heureux dans lesquels la maladie a complètement avorté. Tantôt des cavernes plus ou moins considérables se tarissent, et il s'établit dans leur sein un travail de cicatrisation; et, si la diathèse tuberculeuse a cessé, tous les symptômes peuvent disparaître, et souvent à tout jamais. Mais combien ces cas sont rares? Il en est d'autres chez qui le stéthoscope permet de suivre le travail de cicatrisation, bien commencé; les symptômes s'amendent, lorsque tout à coup, sans cause appréciable, ils reprennent une intensité insolite, et de nouvelles cavernes apparaissent; les anciennes sentent en suppuration. Ces faits, qui m'ont semblé très communs, ne sont pas sans importance pour apprécier la nature de la phthisie, il s'agit ~~tout~~ ~~à~~ ~~prouver~~ aussi que des masses tuberculeuses cèdent à l'absorbtion leurs matières animales, restent alors à la place des concrétions calcaires qui s'intercalent, et peuvent ainsi séjourner longtemps dans le poumon sans trouble appréciable. Un fait qui est soutenu par quelques auteurs, est que les lésions produites par les tubercules tendent presque toujours à guérir; mais qu'il est rare que ce travail tout local arrive à bonne fin! Bientôt de nouvelles productions morbides viennent le contrarier; les anciennes cavernes redeviennent le siège de sécrétions purulentes; de nouvelles

se forment, et dans l'immense majorité des cas, le malade arrive à sa triste fin.

Nature et cause de la maladie.

Peu de questions ont soulevé des controverses aussi vives que celle de la nature et des causes de la phthisie, se renfermant dans l'observation locale des symptômes qui accompagnent le plus souvent les tubercules pulmonaires. Broussais affirma que c'était là une manière d'être de l'inflammation qu'on observe dans un des éléments du poumon, des vaisseaux lymphatiques, et cette seule cause lui parut suffisante pour rendre compte des nombreux phénomènes de la phthisie. Selon lui, l'inflammation pulmonaire précédait toujours la production tuberculeuse. Voici les principales raisons qu'il portait à l'appui de son dire: "Le plus souvent, les premiers symptômes de phthisie sont devancés par des signes bien évidents d'inflammation pulmonaire ou pleurale; les cas qui paraissent échappes à cette regle, sont des cas obscurs qui doivent être interpretés par ceux qui sont bien évidents." Ne serait-il pas possible aussi, dans ces cas, que des irritations anciennes eussent produit des tubercules qui seraient restés dans le poumon, et qui détermineraient à leur tour un travail phlegmasique? Dans le cours de ses expéditions militaires, Broussais aurait constamment observé que la phthisie faisait de grands ravages alors que l'armée séjournait dans des pays froids, humides, (Hollande, par exemple) tandis qu'en Italie, ou Espagne, il n'en était pas de même. A côté de cette manière de voir tranchée, absolue, s'en éleva une autre, non moins tranchée, non moins absolue qu'elle, qui vint contester à l'inflammation toute part qu'on pouvait lui assigner dans la production des tubercules, quelque faible qu'elle fut. Ce fut là l'opinion de Laennec: suivant lui, les irritations pulmonaires étaient tout à fait étrangères au

développement des tubercules; tout au plus pouvaient-elles en hâter la marche. Ces opinions m'ont semblé toutes les deux trop exclusives; il m'a paru que cette différence radicale tenait à deux choses: la première c'est qu'on n'avait pas suffisamment indiqué qu'une même cause, agissant pendant un temps, plus ou moins long, peut produire des résultats divers; la seconde, c'est que dans cette affection, l'organisme est modifié par des éléments très-nombreux. Ce point m'a paru capital: en effet, le froid humide, auquel Broussais a fait jouer un si grand rôle dans la production tuberculeuse, peut produire des affections bien variées, suivant l'état dans lequel il trouve l'organisme, suivant le temps qu'il exerce son action. Peut-on comparer cette cause, agissant brusquement sur un individu, produisant rhumatisme articulaire, une pneumonie, et, dans d'autres cas, si elle se prolonge, si elle est incessante, amenant des modifications profondes, altérant, changeant des tempérament, produisant des diathèses, les scrofules, par exemple, dans ces deux cas, non-seulement les résultats ne sont pas les mêmes, mais le mode d'action me paraît bien de l'être aussi. Qu'est besoin alors de mettre l'inflammation en cause pour expliquer la fréquence des phthisies dans des pays que domine cette constitution atmosphérique? Cette cause est-elle la seule? n'a-t-on pas eu tort de la proclamer à l'occasion des autres?

Il est constant, par exemple, que les animaux transportés des régions équatoriales meurent tous, ou presque tous, phthisiques, quand ils sont amenés dans des climats plus tempérés. Que le froid humide puisse jouer un rôle en tant qu'élément d'inflammation, c'est ce que je suis loin de contester, ce qui doit même arriver souvent; mais que ce soit là la seule cause, je ne le pense pas. Peut-on nier que le soleil n'ait une action dont il est difficile de fixer l'étendue et la valeur précise? Les animaux nés sous les tropiques ne doivent-ils pas en ressentir

la privation quand ils sont transplantés sous d'autre latitudes, quand même on les tendrait constamment dans un milieu élevé de chaleur factice? Les fonctions nutritives ne doivent-elles pas être profondément altérées par la différence qui existe entre les aliments de pays si divers? Serait-on autorisé à ne pas tenir compte des habitudes rompues de cette captivité qui doit être si pénible, et rendre bien amère à ces pauvres animaux une vie jadis si pleine de mouvement et de liberté! Certes, il ne serait facile, en soumettant ainsi à l'analyse les conditions au milieu desquelles se développe la phthisie, de montrer combien sont complexes les éléments qui concourent à sa production. Ce que je viens de dire suffira, j'espère, à prouver combien toutes ces causes sont nombreuses et souvent difficiles à apprécier, et que toutes concourent à modifier puissamment l'organisation. Il y a donc une diathèse tuberculeuse primitive, qu'il appartient à l'avenir de démontrer anatomiquement. Mais l'inflammation est-elle toujours consécutive; ne survient-elle que pour révéler l'existence des tubercules déjà produits; peut-elle simplement leur imprimer un mouvement plus rapide? Non, l'inflammation peut devancer les tubercules. Quelques observations consignées dans la clinique de M. Andral le démontrent sans réplique. Certes, dans de vastes pneumonies occupant une grande partie de l'organe, les quelques tubercules qu'on observe disséminés çà et là sont insuffisants pour donner à une affection si considérable

Je suis même très-disposé à croire que les causes qui amènent la diathèse tuberculeuse disposent singulièrement à l'inflammation. Cette manière de comprendre la pathologie des tubercules constitue, comme on le voit, un rôle important mais secondaire à l'inflammation: c'est là

un phénomène de surfaces; creusez plus avant, vous trouverez la maladie. Ceci nous conduit tout naturellement à établir, dans l'étude étiologique de cette affection, deux sections importantes. Dans la première, nous ferons rentrer les causes, que nous nommerons prédisposantes, causes qui troublent profondément l'économie, la modifient de telle sorte que vienne un léger mouvement, un souffle, la maladie se révélera; ces dernières, nous les appellerons occasionnelles.

Causes prédisposantes. – Certains individus naissent avec des dispositions singulières à la phthisie; les mêmes causes qui, chez d'autres plus heureusement organisés, seraient passées inaperçues, leur impriment à eux des modifications profondes: c'est le tempérament lymphatique qui a ce triste privilège. Les individus de complexion brune, sont moins souvent attaqués, que ceux qui ont la peau blanche et fine. Ceci a été répété de tout temps, je ne m'y appesantirai pas. Le sexe paraît aussi jouer un grand rôle dans cette affection. Les femmes atteintes sont en plus grand nombre que les hommes; peut-être en trouverons nous plus loin la raison. L'age critique, celui de seize à vingt ans pour les femmes, de vingt à vingt-cinq ans pour les hommes, sont les époques où le développement des tubercules pulmonaires est le plus à craindre. Les vieillards en sont très-rarement atteints.

De tout temps l'hérédité a été admise par les observateurs comme jouant un grand rôle dans la production des tubercules; et quoique M. Louis ne l'ait trouvée que comme un dixième dans ses relevés statistiques. Je suis assez porté à soupçonner la valeur absolue de ce chiffre. De quelle manière faut-il entendre la transmission de cette maladie? Voilà où l'on a différé. Est-ce à dire que la matière tuberculeuse existerait rudimentaire dans nos liquides, ou bien ces mêmes liquides auraient-ils subi des modifications restées inconnues jusqu'ici? C'est ce que je vais

porté à croire. Qu'il nous suffise de savoir que l'enfant reçoit de ses parents une disposition telle qu'il est menacé de tubercules. Lorsque cette maladie respecte plusieurs générations, doit-elle être considérée comme héréditaire ? naîtrait-elle sous l'influence d'autres causes dont nous allons parler ? c'est ce qu'il serait difficile d'affirmer.

Mais il est des causes qui, par leur action plus ou moins prolongée, peuvent produire la phthisie chez ceux-là même qui n'ont pas reçu de leurs parents le triste héritage d'une prédisposition tuberculeuse. L'appréciation de ces causes est chose difficile ; je ne sache pas qu'on l'ait abordée, jusqu'à ce jour, d'une manière complète : aussi les réflexions que j'ai à présenter se ressentiront-elles de ce vague et de cette incertitude.

Le froid humide, comme nous l'avons déjà vu, joue un grand rôle dans la production du tubercule : ceci est une chose qui paraît constante ; et, de même que les tempéraments lymphatiques sont plus communs dans ces contrées, l'affection tuberculeuse semblerait devoir suivre la même proportion. Cependant, il ne faut pas se dissimuler que, jusqu'à ce que des statistiques complètes viennent éclairer ce point de la science, il pourra y avoir des doutes. Quel est le nombre relatif des phthisiques ? Entend-on parler des naturels du pays, ou d'individus qui arrivent de contrées plus chaudes. Et ici, le problème se compliquerait : le changement d'un climat chaud dans une contrée froide et humide, me paraît être, en effet, une cause extrêmement puissante de tuberculisation. Une alimentation insuffisante, la respiration d'un air impur, rarement renouvelé, les chagrins profonds, l'isolement, jouent, à n'en pas douter, aussi un grand rôle dans la production des tubercules. Rarement seuls, ces divers éléments acquièrent de la gravité les uns par les autres, et il serait bien difficile,

dans l'état actuel de la science, de fixer leur valeur absolue. Lennec regardait les chagrins prolongés comme une des plus puissantes causes de la phthisie, et il cite à cet égard, dans son ouvrage, l'exemple de religieuses appartenant à un ordre très austère, qui devinrent presque toutes phthisiques. Nul doute que la cause invoquée par Lennec n'ait agi énergiquement dans ce cas; mais combien d'autres dont il n'a pas tenu compte!

L'austérité de la règle devait proscrire tout rapport entre ces malheureuses recluses; le jeûne, les veilles prolongées, les macérations de tout genre, la mauvaise nourriture, tout concourait à la même fin, le délabrement de l'économie. Si l'on avait institué des statistiques sur une vaste échelle, je ne doute pas que les résultats donnés par les grandes villes, relativement à cette maladie, ne fussent incomparablement plus funestes: c'est là, en effet, où l'on rencontre réunies toutes les causes que nous venons de signaler, et il ne faudrait pas croire que les classes riches en fussent exemptes. Que de fois ne rencontre-t-on pas dans leur sein des femmes pâles, anemiques, irritables à l'excès, ne pouvant rien digérer: cherchez la cause de ces mille affections qui se produisent chez elles sous des formes infinies, rarement vous les trouverez. C'est que, surtout dans ces régions de la société, la vie a des mystères que le médecin ne pénètre que difficilement; des passions de toute sorte s'agitent autour de lui, et entretiennent ces maladies sourdes, si mal caractérisées, dont le dénoûment est souvent l'affection tuberculeuse. L'onanisme, les excès vénériens, surtout à l'âge où le corps n'a pas acquis son complet développement, concourent à la production des tubercules; ce sont des causes de la même famille que celles dont nous venons de parler; nous n'y insisterons pas. Mais, je le répète, les causes de phthisie qui résident

dans les nombreux éléments fournis par les relations sociales, ces causes sont très-curieuses et très difficiles à étudier: nous en avons à peine effleuré la source; leur activité semble pourtant s'accroître de jour en jour, et cette maladie paraît augmenter dans une effrayante proportion. Un travail complet sur ce sujet serait une œuvre éminemment utile, et, comme je l'ai signalé au début de cette thèse, ce serait rendre un important service à la science, que de chercher, si cela est possible, dans les temps anciens, les rapports qui existent entre les diverses phases de la vie des peuples, et la production de cette maladie. Les anciens considéraient la phthisie comme contagieuse, et tout le monde sait que Morgagni, qui a rendu de si grands services à l'anatomie pathologique, n'osait pas ouvrir les corps des tuberculeux. Rien pourtant ne justifie cette opinion, tout au plus peut-on admettre que la cohabitation peut produire ce resultat: plusieurs médecins affirment qu'il n'est pas rare de voir des époux se transmettre ainsi cette maladie.

Causes occasionnelles. — Les causes dont il nous reste à parler sont d'une importance moindre, et généralement mieux appréciées. Tout ce qui peut appeler sur les poumons une congestion sanguine, les irriter, peut amener les tubercules, si préalablement il existe la prédisposition, la diathèse dont nous avons parlé. Certaines professions, plus que d'autres, exposent les individus qui les exercent à ce genre de causes. Le chant, la déclamation, le contact de gaz, de poussières irritantes, peuvent produire une inflammation des voies aériennes, et déterminer ainsi la phthisie. A ce propos, il importe d'examiner si la maladie est produite directement par l'action de ces causes: c'est là l'opinion de quelques auteurs; mais ici encore on s'est contenté

d'interroger un seul côté de la question, on a négligé les autres. Comme nous l'avons signalé déjà chez les individus prédisposés à la phthisie, les moindres causes produisent des inflammations du poumon; les variations atmosphériques les plus légères sont ressentiées par eux avec une rare fidélité, les excès de tout genre, une secousse, des émotions morales même suffisent pour provoquer des hemoptysies très-suspectes: quelquefois la cause est si légère, s'il en existe, qu'elle ne peut être signalée.

Traitement.

La phthisie est elle curable alors qu'elle est pleinement confirmée? Cette question me paraît devoir être examinée avant de passer au traitement que cette affection réclame. C'est une opinion assez généralement répandue que les malades atteints de tubercules pulmonaires sont voués à une mort certaine dans un espace de temps assez restreint. Cette manière de voir, qui a dominé la thérapeutique, a produit des résultats bien funestes. Les uns, persuadés qu'il n'y avait rien à faire, et que tout le rôle du médecin consistait à pallier plus ou moins les symptômes qui venaient à paraître, ceux-là, dis-je, se sont croisé les bras, et sont restés dans une fâcheuse immobilité; les autres, avec la même conviction, mais plus actifs, plus remuants, ont demandé à l'inconnu ce qu'ils ont pensé que la science ne leur procurerait pas; ils se sont adressés à l'empirisme, et cette dernière tendance a fait essayer les moyens les plus divers. Tout ce que la pharmacopée a de richesses est venu payer son tribut: l'alchimiste était à la recherche de la pierre philosophale. Quant à moi, je pense que la phthisie est une maladie qu'on peut guérir, et qui guérit quelquefois; les recherches d'anatomie pathologique

de Laennec me paraissent établir ce fait sans réplique; les règles du traitement devront se tirer de l'intelligence complète de la maladie, et le jour où tous ses éléments seront bien appréciés, on aura fait un grand pas vers sa guérison. Nous allons essayer d'établir quelques préceptes, qui seront basés sur la manière dont nous avons envisagé la pathologie du tubercule.

Nous avons été amené à considérer la phthisie comme une altération encore mal déterminée des liquides, altération produite au milieu de causes débilitantes, qui, plus tard, déterminent des produits de sécrétion viciés se déposant dans les poumons et divers autres organes. Si nos moyens de diagnostic nous permettaient de reconnaître la maladie alors qu'elle est seulement générale, le traitement serait simplifié d'une manière singulière; mais lorsqu'elle nous est révélée, son cadavre, si je puis m'exprimer ainsi, a produit une lésion nouvelle toute spéciale, toute différente, et qui réclame un traitement spécial tout différent; la plus grande difficulté du problème est là. Ainsi donc il y a deux médications à mener de front: l'une qui a pour but de remédier aux lésions profondes qui ont modifié puissamment l'organisme: celle là doit tonifier, reconstituer; l'autre, médication de surface, ayant pour but de remédier à des phlegmasies survenues à l'occasion de la diathèse tuberculeuse, réclame ses moyens contraires, des débilitants, des antiphlogistiques. Ces deux systèmes de traitement méritent toute la sollicitude du médecin; mais qu'il n'oublie jamais qu'il ne traite la maladie qu'en modifiant l'économie entière

On est tout étonné en étudiant la thérapeutique de la phthisie, si riche, du reste, vis-à-vis

des indications locales, de la trouver si faible, si incertaine, quand il faut attaquer la maladie corps à corps. Le vague que nous avons signalé dans son étiologie porte ici ses fruits. Pour rendre ce que nous avons à dire plus facilement applicable, nous étudierons les indications thérapeutiques dans trois phases de la maladie: alors que la prédisposition est reconnue sans maladie déclarée, lorsque la phthisie est commençante, et lorsqu'elle est avancée

Nous avons dit que les individus nés de parents tuberculeux, nés surtout avec des attributs du tempérament lymphatique, étaient predisposés à la phthisie: cette consideration doit dominer leur hygiène. Que la mère se garde bien d'allaiter son nourrisson, qu'elle le donne à une nourrice saine et robuste. Qu'ils évitent l'habitation d'un climat froid, humide, où la température est incertaine, capricieuse; qu'ils fuient les grandes villes, les rues basses, mal aérées, où l'atmosphère est lourde et infecte; ce qui leur convient par-dessus tout, c'est le mouvement, le grand air, c'est la chaleur des rayons solaires, une alimentation nourrissante, tout cela, bien entendu, pris avec mesure. Plus que tout autre, qu'ils redoutent un éveil trop précoce des sens; trop souvent les déréglements de leur imagination créent des habitudes bien funestes pour l'avenir: n'est ce point là souvent le germe de la maladie qui nous occupe? Que si de grands chagrins venaient traverser leur vie, ils demandent, si cela leur est possible, des distractions aux voyages. Qu'ils s'appliquent à détruire, par tous les moyens possibles, leurs trop vives préoccupations; la gymnastique, les travaux de corps, doivent occuper une grande place dans les moyens prophylactiques. Les études, les veilles trop prolongées, sont pour eux très-nuisibles;

ils devront les quitter souvent pour se livrer aux exercices du corps et aux distractions.
Lorsque les tubercules sont reconnus ou fortement soupçonnés dans le poumon, la maladie est déjà bien avancée. Quelquefois la thérapeutique est tout à fait impuissante lorsque l'affection envahit simultanément tout l'organe; mais il n'en est pas ainsi habituellement, les tubercules se développent par sécrétions successives, et si l'on est assez heureux pour les reconnaître à l'origine, la guérison offre plus de chances de succès. Voici, dans ce cas, les principales indications qui se présentent: Si les conditions dans lesquelles vivait le malade paraissent de nature à avoir exercé de l'influence sur la production de la maladie, il est indispensable de les faire cesser autant qu'il est possible. Si le malade peut encore supporter les voyages, certes, le séjour dans un pays chaud, peu soumis aux variations atmosphériques, sera le meilleur moyen à proposer; il conviendra sous le double rapport de l'influence d'une température douce et uniforme sur la phlegmasie pulmonaire ou bronchique, existant alors si souvent, et pour les qualités plus stimulantes de l'alimentation, et de l'air de ces contrées.
Mais il arrive souvent que la maladie est trop avancée pour songer à ce moyen; n'existe-t-il pas alors dans la phthisie des symptômes qui viennent contre-indiquer formellement cette médication tonique que nous avons préconisée comme traitement général? Il ne faut pas se dissimuler que, dans ce cas, si le milieu dans lequel vit le malade est défavorable, si la plupart des causes qui ont amené les tubercules subsistent encore, on n'aura que de médiocres résultats à attendre.

Qu'on n'oublie jamais que les influences si salutaires d'un changement d'un climat froid et humide dans des pays chauds, les distractions des voyages sont difficilement remplacées.

Il est des nuances que rien ne peut parfaitement indiquer, et qu'on laisse à la sagacité et au discernement du médecin. Certes, dans le cas où une pneumonie intense, une pleurésie, menacerait les jours du malade, il faudrait recourir à l'indication la plus urgente; mais si la phlegmasie est légère, que la fièvre soit seulement entretenue par la présence des tubercules, aussi longtemps, du reste, que les voies gastriques seront saines, et que l'appétit subsistera, il faudra nourrir le malade. Dans ces cas, loin de voir la fièvre augmenter, elle diminue le plus souvent, et les sueurs se modèrent.

Du reste, la phthisie tuberculeuse m'a paru coïncider très-fréquemment, et avoir plus d'un point de contact avec les états si communs de chlorose et d'anémie qu'on rencontre souvent chez les hommes, et bien plus souvent chez les femmes. Ainsi donc, aussi longtemps que l'appétit subsistera, l'alimentation sera continuée: j'insiste sur ceci, car lorsque des troubles des voies gastriques viennent compliquer la maladie, désormais nul aliment n'est supporté; les efforts, les vomissements retentissent dans le poumon, et en augmentent les phlegmasies; dans ce cas, le traitement adoucissant est lacté et le seul possible, et la maladie n'est pas loin d'une terminaison funeste. Mais si la médication tonique produit des résultats heureux, il peut arriver que le travail de tuberculisation cesse, et il reste alors des cavernes en suppuration, dont il faut hâter les tendances à la cicatrisation. Tout en continuant la médication générale, ici bien des remèdes se présentent, et sont efficaces: la nombreuse classe des des expectorants, peut être employée à désobstruer les cavernes, puis des aspiration de certains gaz,

pour hâter le travail de cicatrisation. Si la toux est persistante, et qu'elle fatigue les préparations de Belladone, de Jusquiame, peuvent être fort utiles. Quant aux irritations chroniques des poumons, à moins de cas rares qui nécessitent la saignée, on les combat de préférence par des vésicatoires volants ou à demeure, des ventouses scarifiées, des cautères, des moxas.

Mais lorsque les malades sont arrivés au dernier degré de la phthisie, que les poumons sont criblés de cavernes, que le marasme est extrême, que des altérations importantes ont désorganisé l'estomac, le foie, les intestins, &c, tout le rôle du médecin consiste à pallier le plus qu'il peut les symptômes dominants: contre la toux, les émollients, les légers expectorants; si elle est sèche et douloureuse, on se trouve bien de l'emploi de la belladone, de la jusquiame; les diverses préparations opiacées, pourront être employés pour combattre la diarrhée et les vomissements; s'il survient des hémoptysies, les astringents devront être employés. Enfin les sueurs seront avantageusement combattues par l'acétate de plomb, le sulphate de quinine; mais tous ces moyens ne font que convoir un instant la marche de la maladie, qui éclate bientôt avec plus de force.

Ici se termine ce que j'avais à dire sur le traitement de la phthisie; il n'a pas été dans ma pensée de présenter les traitements divers qui avaient été institués à l'occasion de cette maladie, ma tache eût été beaucoup trop longue: ce que j'ai voulu, c'est esquisser une médication dont les bases seraient déduites de la manière dont j'ai envisagé la pathologie du tubercule. Si les préceptes généraux que j'ai posés s'accordent avec elle, j'aurai atteint mon but.

An
Inaugural Dissertation
On
Rheumatism
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By
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Rheumatism

This is a very common disease, and is found in all temperate climates. It is a general disease, occupying a general tissue, or set of organs; though it may occupy almost any part of the body. It is characterised by pain, heat, redness, swelling, and fever; and by its wandering nature. One of the most prominent features of this disease is, its migratory nature; shifting from one place to another. Perhaps there is no disease in which metastasis is more likely occur than in this. The pain, which is felt in one place may suddenly leave it, and show itself in some other; and, perhaps, as suddenly return again, or it may lay hold on some of the internal organs.

The victims of this disease, after the first attack, are liable to frequent relapses.

The antiphlogistic treatment is the—

general one; but this is not applicable in all cases.

The true seat of this disease is not positively known. Macintosh says "it would be interesting to know whether it is in the cellular tissue, bloodvessels, nerves, or lymphatics". Dr. Watson places it in the fibrous tissue.

We generally find it in the muscular and fibrous tissues,—in the muscles of the neck, and the fibrous parts of the joints.

Now, pain is one of the most prominent symptoms; though, in some cases it is absent; whenever it is present, it will be increased by pressure or motion. And, I think, in most cases where the pain is wanting, it may be excited by motion. There is generally an increase of sensibility in the affected tissue; though, in some cases, there is little or no pain.

Simple pain in a muscle is rheum-atism; and this may occur in any mus-cle in the body. When it shows itself in this form, there is little or no fever; but, if it show itself in the tissue of a joint, there is, in all cases, more or less fever. Hence, it has received the na-me of arthritic fever.

Muscular rheumatism. This form gen-erally attacks the muscles of the head neck, and body. Symptoms:- Pain on contraction of the muscle; no general fever; pain aggravated by the warmth of the bed; stiffness of the muscles. If this stiffness continue for a long time, the affected * becomes atrophied.

Generally this is the only alterat-ion found. If any other is found, it is, per-haps, the effect of common inflam-ation.

If rheumatism seizes any of the

* muscle

thoracic or abdominal muscles, it will affect the respiration to a greater or less degree. This simple form lasts only a day or two and, then, disappears: the eye, in some instances, it lasts much longer. It produces no lesion. This form is said to be very common in old persons and, rare in children

Causes. The most frequent cause is, exposure to cold and moisture.

Treatment. This depends somewhat on the location of the pain or. And consists in general and local bleeding, flying blisters, liniments, anodynes, diaphoretics, baths, colchicum, camphor, &c, — As circumstances may require.

Rheumatism sometimes attacks the Occipito-frontalis muscle. The symptoms are, pain increased on pressure: no fever: general uneasiness, &c. This is distin

guished from Erysipelas, by the absence of fever: and from Venereal nodes, by the presence of pain.

Treatment. Laxatives to open the bowels: flying blisters; warmth &c. Some patients cannot bear heat - owing to some idiosyncrasy. We also give Hydriodate of potassa, Sarsaparilla, Guaicum &c.

Rheumatism sometimes affects the sclerotic coat and muscles of the eye. Symp. A dull and aching pain in moving the eye; extending to the forehead and temple: the vessels of the eye more or less tinged. Treatment as above named.

It sometimes affects the muscles of the neck. Symp. Pain: stiffness of the muscles: the pain may subside, but in motion, it returns again. Now if this rheumatic stiffness continue for a long time, distortion of the neck may be produced, and that, more or less permanent.

Treatment. Bind a piece of flannel around the neck; and put a hot sad-iron over it. I think if we were to use a small quantity of the spirits of turpentine, on the rigid muscles, it would do no harm. Give laxatives and diaphoretics.

Sometimes it attacks the intercostaly muscles, giving rise to pain, more or less like that of pleurisy. The pain is when the nerve passes over the rib. We are generally able to distinguish them, by the absence of fever, which is always present in pleurisy. This is called "Pleurodynia".

Treatment. Laxatives, flying blisters, &c.

Rheumatism sometimes attacks the muscles of the abdomen, giving rise to symptoms very much like those of Peritonitis or colica pictonum; and may be confounded with either of these, but they may be distinguished.

In Peritonitis there is fever, tenderness, &c. In colica pictonum, pressure relieves the pain &c.

Sometimes it occurs in the loins, then, is called "Lumbago". In this case it may be mistaken for Nephritis: yet the diagnosis may be made out. In nephritis, we have a dull or a severe pain on one side of the loins, running along the course of the ureter, numbness in the corresponding thigh; retraction and pain of the testicle; nausea and vomiting.

Treatment. Laxatives, cupping, &c.

Rheumatism may attack all of the internal organs. The fibrous tissue of the heart, perhaps, more frequently than any other. The fibrous part of the liver, intestines, bronchi etc. It sometimes occurs in the hip, and is called by nosologists "Sciatica".

Symptoms. Pain radiating along the -

course of the sciatic nerve; no fever except*.

We should treat this on the general principles. Calomel, Opium, Colchicum &c. If it is purely rheumatic: then means will generally cure it. Sometimes it is purely nervous, or it may arise from some irritation. Then other remedies should be used, as the oil of turpentine, Carbonate of Iron &c. Revulsives as bleeding, blistering &c.

Rheumatism is therefore inflammation of a peculiar or specific nature. It rarely terminates in suppuration or gangrene as ordinary inflammation does. It is divided into two species. Acute and Chronic. They run insensibly into each other: the chronic is frequently a sequel of the acute. But the chronic form may exist from the commencement of the disease.

(* at the onset of the disease)

Rheumatism is characterised by pain, heat, redness and swelling of the parts lying around, or entering into, the composition of one or more of the large joints of the body, with a disposition to change from one joint to another, or to some internal organ, especially, the heart; with fever of a sthenic type.

Acute Rheumatism.

It generally seizes the fibrous parts which lie around the larger joints:— the ligaments and the tendons. It may occupy one or more joints at the same time.

Symptoms. The patient feels lazy and dull; then a sense of chilliness, followed by fever, pain, heat, redness, and swelling of one or more joints. Thirst; anxiety; restlessness; tongue more or less coated with fur: sore followed by stiffness, numbness, and want of power. The

pain, perhaps, changing from one joint to another; the pulse, full, hard, and bounding; the urine high coloured, and depositing a lateritious sediment; profuse acid perspirations which give no relief to the patient's suffering.

The pain differs, in different individuals, in its intensity. It is aggravated by pressure or motion. The skin becomes tense and shining; sometimes crepitation is observable. The swelling is not always present: it is not found in the shoulders or hips. When present, it is caused by the turgidity of the blood-vessels, or by the effusion of fluid into the cavity of the joint. The blood exhibits a buffy coat. There is always an increase over the normal quantity of fibrin. The pain and chill frequently come on together, during the night; and runs from joint to joint.

Sometimes rheumatism of the muscles and joints are combined. The patient generally sweats throughout the disease.

Post mortems give us little or no alteration of structure.

If the pain and fever decline, it is looked upon as a good sign; but if the fever continues with an active pulse, the disease will still be troublesome.

Besides this fibrous form, some authors mention another - the synovial.

This form of the disease implicates only one or two joints.

Symptoms. This form shows itself generally in the knee joint; the pain does not last long before the swelling comes on; the tongue is foul; the perspirations not very profuse.

There is slight redness of the skin, the swelling is produced by effusion into the joint. Fluctuation is

distinctly felt by applying both hands to the affected joints; very little fever; and very little tendency to metastasis; but appears to be more or less fixed.

There is little danger in this form of this disease except to the joints. If it runs on it may produce whitesweling, or anchylosis of the joint. It is seen in those of a strumous diathesis or of a broken constitution. The duration of this disease is not fixed; it may run on a long time. There exists a strong tendency or predisposition to secondary inflammation. If it run on it may implicate the heart in a chronic form, or it may affect the pleura. It may also implicate the membranes of the brain.

Pneumonia as a complication in this disease is very rare; though in

some instances it may exist.

Post mortems show us no special lesions. Sometimes a little pus is found; but it is considered to be the effect of ordinary inflammation produced, perhaps, by contiguous sympathy.

Simple Rheumatism is a trifling disease, only serious when it changes to the heart or some other vital organ; this change is estimated to take place one in every five cases; though it may occur once in three or once in ten or twenty cases.

When it does take place, it gives rise to Pericarditis or Endo-carditis. It is somewhat difficult to determine, precisely, the onset of the disease of the heart.

The duration of this varies from three weeks to six months or even longer. Most patients recover; but they are subject to repeated relapses. When it occurs in persons of strumous habits

or broken constitutions, it is very diffi-
-cult to cure: but, as before stated, the dan-
-ger to the patient depends on the compl-
-ications that may be present.

Diagnosis. The only disease with which
this is likely to be confounded is Gout.

Rheumatism generally attacks the
larger joints, frequently changing
from one to another. It spares no age
nor sex: pays no regard to health:
pain is generally numb or gnawing:
though, sometimes, it is very severe.

The inflammation is less intense; swell-
-ing, not so rapid nor so great; exacerba-
-tions towards night; pulse full, hard,
and bounding.

Gout, on the other hand, generally atta-
-cks the smaller joints; and is generally
connected with some internal disease.
It rarely attacks young persons. Pain is
burning, pungent, and lancinating.

The external inflammation is of a bright red; the swelling takes place rapidly; and the parts are more sensible and tender.

Prognosis. This is favourable in the adult; grave in children because they are more liable to metastasis. This is strongly marked from infancy to puberty, less so from puberty to the age of forty; and rarely met with after that period. The form usually met with after forty is muscular rheumatism. Males are more exposed than females, hence it is found extremely often in seamen and soldiers. About one half of the cases are supposed to be hereditary.

The predisposing causes are bad food, bad lodging, filthiness, and excess in debauchery of almost any kind.

The exciting causes are exposure to cold and moisture, lying in damp linnen: changing winter clothes too early in the spring &c.&c.

This disease is erratic in its nature and is said, by some, to be produced by some Materies Morbi existing in the blood. Sometimes the local symptoms are absent, but the fever continues, and vice versa.

Treatment. There is no specific for this diseases Every physician should exercise his own judgement in this as well as, in all other diseases: and treat it on the proper principles.

No matter at what time you see this disease, you may commence to treat it actively; Bleeding is a general assistant remedy; and, is practiced where the patient is plethoric or of a good constitution or when the pain is so severe as to req-

-ive immediate relief. The pulse full hard, and bounding. These are the circumstances, which, justify the use of this agent. Venesection is not practice where the patient is weak and delicate, or whe the disease has assumed the subacute form. It is practiced not to cure but to relieve, and prepare the system for the use of other remedies. Some physicians think venesection increases the metastatic tendency of the disease to the membranes of the heart or brain. Hence some rarely use it.

Opiates are very useful and are used extensively: but they alone will not cure the disease. They are used to calm the pain and restlessness. For this purpose we may use the tinc. opii in 25 drop doses, or the solid opium in grain doses or Dover's powder in 10 gr

doses, repeated every 3 or 4 hours.

Purgatives are very useful. They exert a great influence on the disease by their sedative effect, and by their action on the liver and on the general system. The most useful are Magnesia, Senna, Rhubarb, Calomel &c. Calomel is the one most frequently used; and is given* in small and repeated doses: by others, in large and decided doses. Dr. Chambers' mode is perhaps the best; and is as follows: After one or two full bleedings in the robust, or without bleeding in the feeble and delicate, 8 or 10 grs. of Calomel with a gr. in and a half of Opium, according to the age of the patient and severity of the disease, is given at night, for several nights, and followed every morning, by a dose of salts and senna, sufficient to secure three or four stools.

* by some.

with this is combined thrice a day a saline draught containing 15 or 20 m. of vinum Colchici and 5 grs. of Dovers powder. When the severity of the symptoms has subsided, the calomel may be omitted but the opium or Dovers powder should be continued. The colchicum and black dose are still to be given.

Diaphoretics are not much value in this disease.

Diuretics are useful. Alkalies are also very useful they defibrinize or rob the blood of a part of its fibrin which is always found in excess in this disease.

The Iodide of potash is, perhaps, more frequently used than any other of the class.

The Ammoniae acetas, phosphates are also spoken of as very useful agents.

In all cases watch the patient carefully. Pay strict attention to the internal organs, especially the heart. If at any

time of the disease you detect the bellows sounds, or the to and fro sound, the attend countenance, you may be sure that pericarditis or endocarditis is set up. Then push your mercury to slight salivation and keep it up until the patient is out of danger, or until some other circumstance should induce you to stop it. At the sametime it may proper to use one or two local bleedings over the region of the heart.

Local linniments are not advisable, neither are cold applications of any benefit. Some however recommend flannel cloths wrung out in a solution of opium or camphor and applied to the joints if the pain is severe.

Place the patient on a proper regimen, and pure all necessary precaution during convalescence by hygienic means and the

use of barks, quinine and other tonics.

Having made the foregoing remarks on the character of Rheumatism, we are to consider the nature and character of all other diseases, incedent to our race, on the same principle: Acting cautiously and prudently, and, applying our remedies properly to each and every case that may present itself to us.

Medicine being a voluminous study; and, time, short; the student is not able to cram it all into his head and retain it there. A very long lifetime wouldnot complete it.

I think it very necessary to offer some apology for the errors contained in these pages, therefore, I throw myself on the lenity of your judgments.

J. R. Andre.

Baltimore Feb. 24th. 1830.

An

Inaugural dissertation

on

Measles.

Submitted to the examination

of the

Provost Regents and Faculty of Physic

of the

University of Maryland.

for the degree of.

Doctor of Medicine

by

John D. Readel Jr.

of Baltimore

Maryland.

Anno Domini M.D.C.C.C.L.

Gentlemen according to the custom of the University of Maryland I will write a treatise on the symptoms, course, and treatment of Measles. As it is, no one with as little experience as myself, can pretend to give anything new or to write on any disease so long recognized as this without using nearly the same words as others more capable than myself have used. Nevertheless I will make it as original and concise as possible.

Rubeola, or as it is more commonly called Measles, is a contagious febrile disease characterized by the symptoms of catarrh and the appearance of a rash on the skin about the fourth day without the disappearance of the fever. We do not know when the virus first appeared. The first accurate

description of it, is that which we find in the writings of the distinguished Arabian Physician Rhazes. It was known in Asia for a long time before it appeared in Europe. It was for a long time strangely confounded with small pox by our earlier modern Physicians.

When a person is about to be attacked by Measles he experiences feelings of lassitude, weariness, pains in back and limbs, and some headache. Then he has a chill followed by flushes of heat frequent pulse, loss of appetite, furred tongue, and all the other phenomena of fever. The fur on the tongue is peculiar. Some of the papillae appear through the coat of fur red and shiny like a raspberry which is covered with cream. The fever may appear and continue for five or six days before the eruption appears, although it most generally appears on the fourth day of the fever.

At the same time the patient experiences symptoms of uneasiness and irritation in the eyes, fauces and nostrils, causing a profuse discharge of tears, sneezing soreness of the throat and huskiness of the voice. An acrid discharge issues from the nostrils irritating the upper lip and edges of them. There is also a dry and hoarse cough with dyspnea. Sometimes there is nausea and vomiting. In general the bowels are constipated but sometimes on the contrary there is diarrhea. Sometimes the first stage is very mild with slight Catarrh and no fever. In some instances on the contrary the fever is of a very high grade and symptoms of severe bronchial or pulmonary inflammation are presented. These symptoms generally continue for three or four days and occasionally remit. The eruption generally appears on the fourth day

but sometimes is delayed for a week or more. When this rash (which is pathognomonic) first appears, it is in small and distinct spots like fleabites, which can be made to disappear on pressure. They first show themselves on the face and neck, and from thence spread, in the course of 24 or 36 hours over the whole body. These spots become confluent and arrange themselves in a crescentic form, leaving an interval of sound skin between each patch. The skin has a rough feel, like gooseflesh. The eruption is of a purplish hue, except on those spots where the skin is very vascular, and when the fever is very high, when the eruption is of a brighter hue. Sometimes minute vesicles appear mingled with the rash.

There is great variation in the quantity of the rash. Sometimes it is small in quantity and that in isolated spots. Sometimes on the

contrary it covers almost the entire body
Occasionally when one of the limbs is irri-
-tated or inflamed from any cause, the
rash first appears on it, but this is very
seldom the case. On the third or fourth
day of the eruption and the seventh or eighth
of the disease, there is great heat and itch-
-ing of the skin. The febrile symptoms
do not decline on the appearance of the
eruption, indeed they are sometimes in-
-creased. The cough now becomes loose and
there is mucopurulent expectoration.
On the seventh day the eruption begins
to decline. It first disappears on the face
and then on the body and extremeties.
Sometimes it lasts only two days, and
again it may last for a week or more.
The red colour gradually fades and des-
-quamation occurs. But the desquamation
is not uniform, sometimes showing itself
on the face and neck alone and sometimes
not showing itself at all.

It may continue for four or five days and is attended with itching. The desquamation is furfuraceous.

Diversities and complications. Sometimes in consequence of some internal irritation, or in consequence of great debility the eruption is delayed. Again on the contrary in consequence of exposure to cold or of excessive purgation, retrocession of the eruption may occur. And when it does there is always cause for dread of some internal mischief. It is very apt to be followed by diarrhea, dysentery, coma, convulsions or great depression of the powers of life. In some instances the rash returns of itself and this is always a favourable sign. Sometimes although we have the rash, we have no cough.

Measles of a very malignant type sometimes occur. When the other diseases of the season have a typhoid tendency

they also assume that form, and are very fatal. These malignant cases may be intermingled with the milder cases. Occasionally this malignant character does not appear before the second stage. When it does the rash may be of a very dark hue and very slight in quantity, and may be intermingled with petechiae, and the cuticle may peel off like wet cobweb when you rub it.

The pulse is small and frequent. There is great nausea and vomiting, and in teething children there may be coma or convulsions. When the patient survives this, he is generally carried off by some complicating inflammation or by dysentery. Inflammation of some of the different organs is the most frequent complication. That of the lungs or bronchitis or enteritis are the most common all. In children the gums sometimes become gangrenous.

Measles are very rare before the first dentition. A diarrhea sometimes occurs which if not checked will carry off the patient. Pseudo membranous inflammation of the larynx may occur and is very dan-gerous. A person who may be afflicted with a chronic disease of the skin, are entirely rid of it on the occurrence of an attack of measles. But generally Mea-sles leaves other diseases behind it which are generally very unmanageable and disagreable such as chronic inflam-mation of the eye lids, fistula lachry-malis, and in persons of a scrofulous diathesis we may have an oegema with a necrosis of the nasal bones. Phthisis is often developed and is very rapid in its course. Exposure to cold sometimes through very rarely brings on dropsy.

Chronic inf of skin and inflammation and discharge from the ear, also occurs.

Anatomical characters. The signs after death from uncomplicated measles are very few. The inflammations are like all common inflammations. The blood which is found in the large vessels and cavities of the heart is fluid and blackish. The fibrin rarely exceeds the normal quantity and is sometimes below it.

Diagnosis. In the early stage of Measles we cannot decide positively. When we see the conjunctiva red and inflamed, and catarrhal symptoms are present, and when some person in the neighbourhood or family is affected with it we may be pretty sure it is measles. There are only three diseases with which measles may be confounded, and these are Small pox, Scarlatina and Roseola. When the eruption is fully formed we can decide with certainty.

As in small pox the eruption feels as if there was a grain of sand under each pimple and also the fever disappears on the appearance of the eruption. In Scarlatina the redness is continuous without the intervening space of sound skin. In Roseola there are no catarrhal symptoms. Even if we see a person during the period of desquamation we can distinguish from scarlatina. As in the latter the cuticle peels off in large scales and in the former it is furfuraceous and like bran.

Prognosis. In simple uncomplicated cases the prognosis is very favourable. In case of an epidemic of measles, we must be very guarded in our prognosis as the most simple cases may become malignant. It rarely terminates in death in the first stage. If the patient is recovering from any other disease. as.

diarrhea, dysentery or Hooping cough, it is generally fatal. Adults generally suffer more than children.

When the eruptive fever is severe, or the eruption is retarded, or irregular, or when convulsions occur in children, it is very dangerous. When the eruption retrocedes or when haemorrhage occurs it is dangerous. When pregnant women are attacked abortion generally occurs. When a puerpural woman is attacked Peritonitis and death occurs. On the contrary when the eruption is full and regular, and the skin moist the prognosis is good.

Cause. Undoubtedly there is but one specific cause for this disease. That this poison is generated in the bodies of those attacked, and affects all who come near, and are susceptible of it. This poison exists in the blood and secretions

of those affected, and is capable of being transmitted by inoculation in the same manner as the small pox virus, although it does not modify the disease as that does. Like small pox this disease rarely affects a person a second time although there are cases in which it has done so. This disease is known all over the civilized world. The poison always exists in the atmosphere. Although always endemic in the large cities, there are some regions of country in which it is rarely seen. Epidemics of this disease occur generally in the fall and winter and when the weather is damp. It may affect a person at any period of life although it affects children by preference. Some authors say that the patient's body is contagious for twenty days after the appearance of the eruption

The period of incubation is from 6, to 10, days although it may be much longer or much shorter.

Treatment.

We have no antidote for this disease. In the milder cases we have nothing more to do than to watch for and prevent complications and also to prevent the officious, and often hurtful interference of friends. We must keep the patient in bed keep his bowels open and prevent him from exposing himself to cold until after desquamation has taken place, as this disease does not bear exposure so well as scarlatina and small pox. It is best to keep the room dark to prevent the excessive inflammation of his eyes which is very apt to come on.

Keep the patient on simple diet and give elder blossom tea, or tea made from the blossoms of the linden tree, or infusion of boneset with Spts mendereris or Spts aetheris Nitrici

If the bowels are constipated we may give the mild laxatives as Rhubarb, or Rochelle salts.

As children are generally restless, and liable to throw the cover off we must watch them and keep them covered, but not so warm as to make it uncomfortable. As the cough depends on the inflammation and the eruption in the throat, which is the same as that on the skin, we can give no cough mixture which will do any good.

When the inflammation and cough are excessive we may draw blood either locally by leeches or generally, and at the same time we may give dovers powder.

or as Willan advises we may give an emetic. Saffron tea is another good domestic remedy and as the parents or friends always wish for something to be doing, this is the best thing we can give. This is all that is necessary in mild cases.

Treatment of complications.

When the symptoms threaten Croup we may give an emetic of Ipecacuanha, followed by a dose of Calomel, and this to be followed by Ipecac in small doses. When the inflammation is intense we may bleed both generally and locally. Bloodletting is well borne in this disease and is necessary in all these inflammations.

Indeed some recommend bleeding before or during the eruption, but this practice is very hazardous as it may retard or even cause retrocession of it.

When the bronchial inflammation is intense or Pneumonia supervenes on Measles, we must bleed copiously, as it is as well borne as in attacks of simple inflammation. The Pneumonia occurs almost without pain and as children swallow their sputa it is hard to find out, but if we see the cheeks grow purplish, the alae of the nose expanding, an anxious expression of countenance, and the pulse full hard and frequent, we may expect Pneumonia.

If these symptoms appear we must bleed freely locally and generally, apply a blister to the chest, and give the patient Ipecac (instead of antimony, as the latter is liable to cause hyperpurgation) and opium in the form of dovers powder give calomel in small and frequently repeated doses, and use all the other means as if for the relief of simple Pneumonia.

When retrocession occurs, with the signs of internal mischief, we should interfere and bring it back to the surface as soon as possible.

For this purpose we should use the hot or vapour bath rub the surface with mustard, or apply an onion cataplasm to the whole surface. Give the child saffron tea or Hoffmans anodyne.

Should a Typhoid state of system be the cause, we should give wine whey or some of the preparations of Ether or ammonia. When measles occur during the period of dentition and inflammation of the brain occurs, we should apply 4 leeches behind the ears, mustard plasters to the feet and extremeties, and a blister back of the neck.

When diarrhea is moderate we should not interfere, but if it becomes excessive

we should check it, but not with astringents.

When an epidemic of measles occurs which has the malignant character we should not use the depleting method, but give tonics and stimulants, and when inflammation occurs we should be very cautious and use only local depletion, blisters, calomel and opium &c.

We should allow them only simple diet. and when the fever is high we should allow them only to take liquid aliment.

But as we have already said we should not do too much.

John D Readel Jr

An

Inaugural Dissertation

On

Bronchocele.

Submitted to the examination of the Provost Regents

and

Faculty of Physic

of the

University of Maryland

For the degree of Doctor in Medicine

By

Rushrod L. May

of Virginia

It is quite customary among students, when they are required to write a composition on some subject connected with medicine, to occupy twenty, or twenty five pages in expressing that, which could easily be reposed on ten or fifteen pages. Giving direct language more acceptable than circumlocution, I shall endeavour to say what I have to say in as concise a manner as I possibly can. The disease which I have chosen as the sub-stratum upon which the superstructure of my remarks is based is Bronchocele. The name of this affection is derived from two Greek words; one signifying the windpipe, the other a Tumor, it is known in France by the appellation Goitre, which is probably derived from the Latin word, Guttur, the throat; the disease consists in a morbid enlargement of the thyroid gland. The tumor in different individuals presents very different phenomena; and frequently in the same individual under dif-

=frent circumstances. it is usually soft, but sometimes it is hard. it is general=ly not painful even when roughly handled. it may vary greatly in size consistence &c. sometimes it is very small sometimes of very considerable magnitudes. some authors mention cases in which it was as large as a pumpkin, when it is incised the cells of which it is composed are found in various conditions some being greatly enlarged, while others do not deviate ma=terially from their normal size. they con=tain contents which are sometimes soft, sometimes gelatinous, and sometimes cartilaginous. it does not seem to be peculiar to the human race, for it has been known to occur in cattle and dogs. sometimes it continues to increase until it destroys life by pressure upon the Tra=chea and the vessels going to and returning from the brain; sometimes it remains sta=

tionary after it has attained a certain size. it frequently affects the voice so that a person afflicted with it often speaks in a croaking tone. sometimes it occurs as an idiopathic affection, sometimes it is hereditary, being transmitted from parents to offspring. although both parents may have Goitre while their progeny may be perfectly healthy. females appear to be more susceptible of this disease than males. it usually makes its appearance about the eighth or tenth year, though some authors mention cases in which it was congenital. it is stated by some authors that if both parents for three successive generations have Goitre, their offspring ~~the~~ will not only be Goitrous but Cretins or Idiots. it does not appear to be confined to any particular section of the globe, occurring in the temperate, torrid and frigid zones -

in all latitudes and all longitudes, in Europe, Asia, Africa and America, yet notwithstanding it may occur in all quarters of the globe it is far more prevalent in some situations than in others, for instance, in Switzerland it is quite common to meet a person with a Goitre while in the greater part of the United States it is almost unknown, though occasionally in some localitys we meet with a few cases. it appears to be dependent in a great measure upon the quality of the water. lime water or water impregnated with various animal and vegetable matters appears to predispose to if not actually to excite this disease. in Switzerland where the disease is so prevalent, the inhabitants drink the water of the lakes and rivers which is sometimes from the various impurities it contains as black as ink.

at Edmonton, in British America, on the banks of the Saskatchawan the people drink the river water which contains various earthy and vegetable impurities, and Goitre is very common there; it seems that persons who drink water impregnated with calcareous salts are particularly apt to have this disease; it seems that situation has some influence over this disease, for some Medical authors say that persons residing on mountains are less liable to be affected than the inhabitants of the valleys. (I speak now of those districts in which the disease is prevalent.) and they say also that persons having Goitre while living in the valleys have recovered entirely, without employing any remedial means by removing to the mountains. it appears also that the quality of the food and the state of the atmosphere as its

regards purity, or contamination with different deleterious gases and exhalations, have considerable influence over this disease; for in those districts in which it is most prevalent, the food is generally of the most meagre and unwholesome kind (for the people are very poor and unable to procure wholesome nourishing aliment;) the air too contains a great quantity of the deleterious effluvia arising from the decomposition of various vegetable and animal matters, which is put up by the mountains.

Diagnosis. Aneurism of the Thyroid arteries may be distinguished from Goitre by its pulsations. The Thyroid gland is subject to inflammation which may be distinguished by the hardness of the swelling, redness, pain and heat, the suddenness of its appearance &c.

encysted tumors and Scirrhus which sometimes attack this gland may be distinguished from Goitre by the symptoms which characterize these affections

Prognosis — If the tumor be soft and of inconsiderable magnitude, and if it occur in young and otherwise healthy individuals, our prognosis should be favorable; since such patients ordinarily recover under proper treatment. but on the contrary when it occurs in persons in the decline of life and when the tumor is very hard cartilaginous or Osseous, and when it is of considerable magnitude, our prognosis should be unfavorable since it has been found by experience, that these persons, as a general rule, carry a glandular enlargement with them to their graves.

Treatment — The most efficacious

remedy in this disease is Iodine. the usual mode of administering which, is in combination with an alkali, Iodide of Potassium or Iodide of Iron giving at the same time an aromatic. but if the case be of recent origin, and there be symptoms of plethora or of general inflammatory excitement it will be necessary to phlebotomize both generally and locally, and administer a cathartic. at the same time while Iodine is being administered internally an Ointment of Iodine or Iodide of Potassium should be rubbed into the tumor. if the treatment by Iodine do not prove successful, Burnt Sponge may be substituted. if that fail the various remedial agents that were used in Olden time, such as iron, Potash - Soda, the Chlorides of Barium and Calcium, Mercury, Belladonna,

Digitalis &c. should have a fair trial at the same time if the patient reside in a locality, where the disease is prev=alent, he or she, as the case may be, should remove to the seacoast, or some elevated healthy locality, where the air is sa=lubrious and refreshing, and where the water is without impregnation. if notwithstanding all our efforts, the tumor does not diminish, but continues to increase threatning death from suffocation or cerebral disturbance, recourse must be had to surgical means. There are three ways by which the surgeon may at=tempt its removal, 1st by the inso=duction of setons 2nd ligature of the arteries which nourish the gland 3d Extirpation. each of these operations is attended with considerable danger, since death has been the consequence, (in some cases.

nevertheless they should be tried as a dernier ressort, since patients sometimes recover. When, if the operation had not been performed, death would have been the inevitable consequence. if a seton be used it should be of silk and large enough to fill the wound made by the needle, great care should be taken to prevent inflammation by phlebotomy if necessary low diet cold topical applications &c. if it be deemed necessary to extirpate the gland an incision should be made in the middle line of the neck and the integuments and muscles dissected from the tumor, care being taken, to secure every artery, as soon as it is divided; then a ligature should be passed through, and tightly tied on each side. the tumor should then be dissected out. Labor vincit omnia -

An inaugeral dissertation on Pleurisy
Submitted to the examination of the
Provost, Regents, and Faculty of the
University of Maryland, for the degree of
Doctor of Medicine.

by. Robt. W. Allen.
of. Maryland

A.D. MDCCCL.

The Nature, Anatomical Characters, and Symptoms of Acute Pleurisy.

The Pleura is the membrane which invests the lungs, and, being a serous membrane, is of course a shut sac.

It, like all parts of the human body is liable to inflammation, and is oftener affected in this way than until lately was generally supposed; as in post mortems after other diseases, adhesions of the internal surfaces have been dis-covered, though, in all probability, the person was not suspected of having had the disease, and these adhesions are conclusive proof that he must have had it at some previous period of his life.

Acute inflammation of the Pleura is almost always characterized by the

effusion of coagulable lymph, which 2
causes the adhesions which I have
just mentioned

In some cases both Pleuræ are in-
flamed, but it is comparatively rare,
and the right is the one oftenest affected
Sometimes also, the whole internal sur-
face of the Pleura is inflamed, at others
only a portion.

Anatomical Characters

The first pathological appear-
ance which we observe, is a slight red
ness of the membrane, and this is
generally followed by increased secretion
of matter, which is concrete, liquid,
or both. Should the secretion be fluid,
the engorged vessels are relieved by it
in some cases, and the membrane remains
smooth. But sometimes a concrete
secretion takes place, or one which soon
becomes so after it is secreted, which

adheres to the membrane and, is not 3
attended by any appreciable fluid.
Generally these two forms are associated,
not always however at the commence
ment of the disease.

This false membrane is at first
so thin that the presence of it is only
rendered sensible by scraping the
surface, soon however it becomes thick
er and assumes a reddish colour, but
is still soft and easily separated
from the true surface of the Pleura.

At first there is but a small quantity
of liquid with the concrete substance
just mentioned, but it soon makes its
appearance in larger quantities, in some
instances gradually increasing until
it reaches several pints, in others never
exceeding a few ounces, and is gen-
erally more abundant in the Chronic,
than in the Acute, form of the disease.

The effused fluid is turbid like whey, yellowish, or seropurulent, or may consist of pus occasionally bloody or with bloody coagula intermingled, and is generally free from odor, or — nearly so. Unless this fluid is confined to one spot, by adhesions connecting the internal surfaces of the Pleura, it changes its position in the Pleural cavity in accordance with the movements of the patient, the last condition being usually the case. Now if the fluid should be present in considerable quantities the lung is compressed, and at last reduced to the form of a flattened cake, and as the air cells are compressed also, adhesions may form between them, and the lung never regain its proper shape. This is more generally the result in Chronic, than in the Acute, form of Pleurisy, the last mentioned is that to which

I wish more particularly to confine myself. During this period the proper serous membrane is neither thickened or softened. That it sometimes appears thickened, is owing to the infiltration of the cellular tissue beneath it, or to the deposition of false membrane on the surface. It may however be peeled off easier at this time, than when the organ is in a perfectly healthy condition.

It is also said that the surface immediately opposite that inflamed is also affected in a great majority of cases.

Should the lung, or any part of it near the Pleura be inflamed, and gangrenous the contained fluid has an extremely offensive odor.

This matter may also communicate with the external air by an opening through to the bronchial tubes, in this case also, the fluid has a bad odor.

In favourable cases should there be little or no effusion of fluid, the opposite surfaces will come in contact and quickly form adhesions, on the other hand if the liquid is in quantity, it is apparent that more time will be required for this result to take place as the fluid must be absorbed before the surfaces can come in contact. It is said, that in some instances the serous fluid is effused with but little or deposition of false membrane, and this fluid being absorbed the Pleura returns to the state in which it was when attacked by inflammation, but this is probably of very rare occurrence. In case the disease should end in adhesion, the lymph by which this is effected, after going through several changes, remains at last in the form of cellular tissue

The walls of the chest are forced

inwards by the pressure of the atmosphere, but will regain their proper shape as the lung regains its power of expansion, but should adhesions have taken place in the air cells while the lung is compressed, then the lung will not regain its power of expansion in which case the healthy lung will enlarge so as to supply the place of the compressed one.

Should the entire cavity of the Pleura be closed by these adhesions the person cannot again suffer from Pleurisy in that side

Symptoms.. Acute Pleurisy commences with a chill, and a very intense pain in the side, these are followed by cough, quick breathing, fever, and difficulty of assuming, and retaining ~~different~~ certain positions. The pain, or a stitch in his side as the patient calls it, is so striking and characteristic of the dis-

case that Dr Watson relates that the Latins called it the "Morbus lateris!" It is generally felt in one spot, and in a great number of cases this spot is just under the breast. The reason is probably this, When nervous trunks are inflamed, the pain consequent on this inflammation is generally reflected to the part when the nerve is distributed, now as the nervous trunks are coming off from the spinal marrow, and are affected in their course the pain is referred to their extremities in front of the chest, and thus we may account for the pain being felt in this region. This symptom generally exists from the outset of the disease; in some patients sharp, either continued, or renewed at intervals, generally more even the more circumscribed it is. The pain is increased by lying on the affected

side, by pressure on the intercostal spaces, by cough, and the act of respiration. It is sometimes increased or diminished along with the exacerbations of the disease. When effusion has taken place the opposite surfaces are prevented from coming in contact by the presence of the fluid, and this circumstance greatly mitigates the pain or causes it to cease entirely. In some cases, however, this symptom is scarce felt at all unless during full inspiration, or coughing, or only a feeling of soreness is complained of by the patient when pressure is made on the intercostal spaces. The next symptom as I have enumerated them, is cough, which is at first short and dry, or only attended by a slight mucous expectoration, and may remain so throughout the disease. In some cases it-

is painful, and in consequence of con-
joined bronchial irritation is marked
by a more copious expectoration, which
is often streaked with blood.

The respiration is almost always
more or less embarrassed, and the cause
of this is, that as the patient feels the
pain consequent on a full expansion
of the lung, he instinctively as it were,
attempts to breathe without expanding
the lungs, as the oxydation of the blood
is thus rendered deficient, he must
breathe oftener to supply this deficiency.
It follows therefore that the breathing
is not only short but rapid.

The circumstance which alleviates
the pain, increases the dyspnoea; that is,
the effused fluid while it prevents the
contact of the opposite inflamed surfa-
ces, and thus relieves the pain, mechan-
ically compresses the lung, and prevents

due expansion. There is always considerable fever, the pulse full, frequent, and tense, but if the pain should be violent it is often contracted.

The fever is always better during the early part of the day, and becomes worse as evening approaches, and in some rare cases there is delirium. The patient at first lies on the sound side, but as the disease advances he no longer retains that position because of the dyspnoea which is occasioned by the fluid pressing on the lung. He now lies on his back with an inclination to the affected side

Physical Signs...

These are sometimes of the greatest importance in making out the diagnosis. In the beginning percussion is quite clear, and the only sign which is noticed by auscultating

is diminution of the murmur of respiration, caused by deficient expansion of the lung. This however may depend on Pleurodynia, so that the symptom is not of the most satisfactory nature. The reason why percussion gives a clear sound at this time, is that as yet there is no effusion of liquid in the Pleural cavity. But when this liquid is present and is of a concrete consistence, it gives rise to a peculiar symptom, which has been called the friction or rubbing sound.

It is asserted that this rubbing sound may be produced by the motion of the inflamed surfaces on each other without lymph being present. This symptom is necessarily of short duration, as the state of the Pleura which gives rise to it is soon obviated by another circumstance

"the liquid effusion" which by preventing the contact of the inflamed surfaces renders the continuation of this sound impossible.

Though this symptom can not always be depended on, yet in some cases it is invaluable.

When the disease occurs only in one side, by comparing that, with the opposite, the diminution of the healthy resonance is rendered easily perceptible.

If the effused liquid can change its place in accordance with the movements of the patient, the greatest dulness will of course be over the most dependent portion of the chest

But when the liquid is confined by adhesions, or in case the whole cavity is filled by it, then

will be exceptions to this rule.

The distinctness with which we hear the respiratory murmur will depend on the quantity of liquid effused, and should this be great it will be entirely lost.

A.D. 1850.

An
Inaugural Report
of
Five Cases of Typhus Fever
Submitted
to the examination of the
Provost, Regents, & Faculty of Physic
for
The Degree of
Doctor of Medicine
by
Thos. J. Murdoch A. B.
of
Baltimore
Maryland

Loyd Stephenson. Coloured
Entered Hospital June 9th 1849. Lived in a dirty Hovel in Brandy Alley, between Eutaw & Howard Streets. Slept on the Ground Floor, on old pieces of Carpet, not having any Bed, the Room & Carpets often being very damp, never suffered for food before he was taken sick. Occupation a Labourer. Went to the Fisheries last Spring, there he was much exposed, and suffered from an attack of "Intermittent Fever." On the 2nd of June was taken with a Chill followed by Vomiting, which compelled him to Remain in the House, except when he was forced to go out & beg for food. Took no Medicine previous to his entering the Alms House, except an infusion of Mayapple, which purged & vomited him. To day Saturday, he was discovered by a Police Officer & sent out to the Alms House. The Man being very stupid, it was impossible to gain any information concerning his symptoms during the seven days he was sick, previous to his entrance

Mc

He presented the following symptoms. when first seen. Drowsy & stupid. Complained of no pain in his Head, or noise in his Ears. Countenance languid. Eyes deeply jaundiced. Tongue red at tip & edges, and coated with a yellowish fur in the middle. No appetite or thirst. Sharp pain in the epigastric region when he takes a full inspiration. Liver enlarged, and very tender on pressure. Abdomen tympanitic & somewhat distended. Bowels open once to day. Urine scanty & high colored. Slight Cough. Lungs apparently healthy. Beat of heart strong & loud. Pulse 120 full, soft & compressible. Skin hot. Pain in the Back & Limbs. Muscular soreness, & Muscular irritability.

℞ Calomel grs xx

I to be taken to night –

Sunday Morning June 10th Patient slept tolerably well during the night, although disturbed by sensations of heat followed by profuse perspiration. Complains of tightness & sharp pain in the Head: Eyes glassy. Tongue coated

with

with a brown fur. Red at tip & edges. Unable to protrude the Tongue without moistening it with Water. No appetite. Vomited during the night a small quantity of dark bitter matter. Great tenderness over epigastric Region. Abdomen more distended than yesterday, and very tympanetic. Liver exceedingly painful on pressure. One Stool this morning thin & dark Colored. Pulse frequent with some fulness. Great prostration. was ordered

℞ Sulph Quinia ℥ss

Aqua ℥ vi

Tablespoonfull every four hours

Brandy ℥vi daily. Strong Coffee three times a day and Beef Tea for Dinner.

Monday June 11th Patient died at 9 o'Clock.

Autopsy five hours after death.

Peritonial covering of the Intestines deeply injected. Some Water in the abdominal Cavity. The Stomach and Intestines greatly distended with Gas. Stomach filled with about a quart of

dark

dark thick fluid. containing specks resembling Coffee grounds. The outer coat of stomach. numerous specks of ecchymosis showing through the peritoneal coat. dark spots of Blood subjacent to the mucous coat & showing through it. Much pointed Capillary injection particularly about the pyloric extremity. Mucous Coat softened & very much thickened. The whole surface of stomach covered with tenacious mucous. Attached to the lesser curvature a large melanotic gland. Intestines - Spots of ecchymosis showing through the mucous Coat. Mucous Coat softened & thickened. The Mucous Coat of Ileum softened. thickened. and corrugated, except the parts occupied by Peyers patches, the mucous membrane was softened. but the patches being less thickened than the mucous membrane surrounding it. Kidneys of ordinary consistence - every where deeply colored with Bile; somewhat congested with Blood which was easily squeezed from a cut surface. Liver larger than normal - deeply congested in its capillaries. Surface presents

a mottled appearance, from a mingling of red & yellow. Gall bladder slightly softened & shewing some capillary injection very much distended with dark viscid bile of a greenish black colour. Spleen larger than natural and a little softened. Mesenteric glands enlarged. Lungs. The surface presenting numerous spots of extravasated blood, this mingled up with a quantity of melanotic matter. The upper lobe more crepitant than natural, middle lobe natural, lower lobe splenefied and passively congested this congestion too deep to be Post Mortem. — Heart filled with dark fluid blood, some flakes of lymph on the right ventricle, the result of old pericarditis. Walls of heart more flabby than natural, ventricles containing no traces of fibrin. Valves and columnae carneae of a yellow tint. All the muscles & fat of a yellow tint. —

The above Post Mortem was partly dictated by Dr Thos H. Buckler —

George Smith Coloured Age 33. Medium height.
Entered Hospital June 9th. Lived in Frederick St
between Lombard & Pratt. Said he had a com
fortable House, and a wife to take Care of him.
Occupation a labourer, generally works on the Wharf,
loading and unloading Vessels. First taken sick
on last Tuesday with a chill followed by a hot
fever, which caused him to remain in bed. Previous
to this he says he felt perfectly well. Wednesday
took a dose of Salts, which vomited & purged him
twice. Thursday evening took another dose which
purged him four times during the night
Also took a dose of Larogues Syrup.
Yesterday Saturday he walked to the "Watch House"
and was sent out in the Hamper Wagon. Was
ordered last night. Map Hydry gr xv. and ℞ Opii
gtt x as he complained of not sleeping during the
night. Complains of no headache or disturbance
about his head when sitting up. Eyes deeply
jaundiced. Countenance bright and no stupor.
Tongue red at tip and edges, & coated with a white

fur in the middle. Complains of great dryness in his Throat. Pain on the epigastric Region when he coughs. Bowels often once during the night. what he passed was of a dark yellow colour — Liver enlarged and exceedingly tender on pressure. Sibilant and sonorous râle over the whole of Chest. Cough very troublesome. Respiration hurried. Pulse 104 soft and rather small. Skin cool. Pain in the Back and limbs. General muscular soreness, and irritability. No emaciation

℞ Sulph Quinia ʒ ß

Mt in chart vi S one three times a day

Brandy ℥ vi daily ℞ Calomel gr x

Pulv Opii gr i

S take to night

Monday Morning June 11th

Great prostration, answers questions rationally. Tongue dry & sordes about the teeth. Pulse frequent and feeble. Skin cool and clammy. Died at half past 3 o'clock in the afternoon —

Autopsy. 19 hours after death —

Lungs

Lungs. upper lobe more crepitant than natural lower lobe splenified and some points of pulmonary apoplexy. on the surface these points very distinct. Heart slightly hypertrophied, left ventricle containing a clot of a deep yellow colour. Right ventricle also containing fibrin extending into pulmonary artery. Extravasated blood under serous lining of heart. Walls rather flabby. Stomach. containing about a half pint of dark fluid. and some flakes of mucous. Mucous coat softened and thickened. and covered with glary mucous. pointed injection. Intestines the mucous coat presenting a yellow tinge. some portions of it exhibiting the small vessels much injected with blood. no alteration of Peyers patches or isolated follicles. Spleen of the consistence of raspberry jam. and almost totally disorganised. Liver. peritoneal coat peels off very readily. texture somewhat softened and friable. much blood oozing from capillary vessels on pressure. Gall Bladder distended with thick green=ish bile. muscles of the whole body soft & flabby. —

John

John Matthews, Colored, a man of large frame very Black. Entered the Hospital the 21st. of May with herpes Zoster was cured and asked for his discharge on the 4th of June. during the time he was sick he was in the same Hospital with the patients sick of this fever. He returned to the Hospital on the evening of the 6th. (not having left the Alms House premises in the meantime). He was not seen until the morning of the 7th. The onset of his disease was marked by a Chill followed by fever. At present he complains of no cerebral disturbance. Has no stupidity. Eyes jaundiced. Countenance indicative of anxiety & some distress. Dyspnoea. Has sonorous râle approximating to bronchial respiration. more marked on the right side with slight subcrepitant râle in the region of the mammae. increased vocal thrill on the right side with slight dulness on percussion. Tongue red at tip and edges coated with a white fur in the middle. No appetite. has had during the night nausea & vomiting. Complains of a dull pain on the

Stomach,

Stomach. Great soreness on pressure over the epigastric Region. Bowels very loose. eight or nine watery stools during the night. Symptoms. Some tenderness in the right iliac Region. slight gurgling. Liver enlarged. tender. and painfull on pressure. Pulse very small frequent & compressible. Irritability of Muscles undulation of pectoral Muscles very striking. Sub anima in face and chest. Slightly emaciated & much prostrated. Contracted condition of Skin about metacarpal bones & ~~fingers~~ fingers. Was ordered

℞ Ol Turbinth ℥iv.
S xx three times a day.

℞ Kramria ℥i
Aqua Bul ℥ij
S Wine glass three times a day

℞ Whiskey ℥i
Salt ℥ij
S rub on the surface of his body.

Brandy ℥vi daily

Calomel gr xx
S take at a dose

Strong Coffee for breakfast & supper. Beef Tea for dinner. Patient died at 8 o'clock in the evening. Autopsy twelve hours after death. Lungs crepitated on pressure, except top of right lung, which had a deposit of tubercular

matter

matter. Some inflamation in the bronchial tubes of right lung. Heart flabby and stained with bile, extravasated blood showing through the peritoneal coat. Blood fluid and dark coloured. Stomach full of a dark yellowish fluid. Mucous coat of stomach of a yellowish colour thickened & much softened. Small intestines, moderately distended with gas; mucous coat very much injected and slightly softened; no ulceration or alteration of Peyers patches or isolated follicles. Colon very much contracted upon itself. Mucous coat much injected. Kidney of a bright yellow colour, no alteration of tissue. Liver very much enlarged & congested with blood, near the colour of Raspberry Jam. softened & perfectly rotten. Spleen softened though not so much as some others of those previously examined who died of the same fever. Muscles, fat and nearly all the tissues were tinged with bile.

John

John Wesley Bond. Entered the Hospital June 4th 1849. Came from Eutaw St. below Montgomery. A large & muscular man. to all appearances of healthy constitution. A hard drinker. according to his own account taking six or seven drams daily. Sick thirteen days previous to his entering the Hospital. First taken with a Chill & weakness in his head, followed by fever. First four or five days Bowels were constipated. after that he had natural Stools. Appetite much the same as in health. For the last four or five days. has been troubled with nausea & vomiting. Vomited yesterday some dark & bitter matter. Took no medicine previous to his entering the Hospital, not having a Medical Attendant. At present he complains of great pain in his Head, also swimming in his Head when he sits up. Eyes jaundiced. Face covered with a profuse perspiration. Tongue coated with a whitish fur. the papillae elongated. Countenance bright & intelligent. Answers

questions

questions promptly & distinctly. Complains of tiredness when he lies upon his right side, makes him cough. Generally lies upon his back, or left side. Dullness upon percussion over the base of both lungs. Respiratory murmur faint. Other parts of the lung the respiratory murmur distinctly audible. Great pain inflicted over the region of stomach by pressure. Liver painfull on pressure and enlarged as perceived by percussion. Pulse rather full & frequent. Great heat of skin. Muscular soreness and irritability. He was ordered

℞ Sal Rochelle ℥ i

It in chart ij one to night & one in the morning

Strong coffee two pints daily

June 5th General condition continues the same. says he feels better than he has, since he was first taken sick. Two stools during the night, small and dark coloured, vomited twice during the night, which he says gave him great relief. Pulse 108 rather full, but compressible

Respiration

Respiration hurried. Some tenderness over stomach and liver as yesterday.

℞ Sulph Quinia gr xxx

H in Chart ij. One to be taken at 2 o'clock, one to night ij and one in the morning. Beef tea for dinner.

4/2

Wednesday June 6th Patients condition evidently worse. Countenance has a natural expression as it has during all the time he has been in Hospital. No stupor or delirium. Complains of great pain in his head. ~~and delirium~~. Abdomen considerably distended & tympanitic. Some pain on pressure over stomach & liver. One stool during the night. Respiration very much accelerated. Pulse 124 compressible. Early this morning he was taken with epistaxis which continued for a couple of hours, altho' ice was applied to his nose and back of neck and astringent injections thrown into his nostrils. It became necessary to plug his posterior nares; when applying the instrument he vomited

a

a considerable quantity of coagulated blood.
Was ordered
~~℞ Sulph Cuprei~~ ℞ Ol Terebinth ziij
♏xxx three times daily
Sulph Cuprei to be continued in x gr doses
three daily
Thursday June 7th Hemorrage successfully
arrested by plugging the posterior nares. Great prostration.
Countenance not so bright. Skin cool & clammy.
Pulse frequent small & soft. Mind rather
confused. seems rather indifferent to surrounding
objects, says nothing. Eyes watery and very
yellow. Tongue coated with a white fur.
Eats nothing. Stools dark & offensive. During
the morning he got out of bed, to go to stool.
(contrary to the orders of the Physician) while
on the chair, he vomited some coagulated
Blood, and fainted; he was immediately placed
in Bed, and died a short time afterwards –
Autopsy twenty hours after death. Lungs
crepitated on pressure. Splenization at the
base of the lungs, points of extravasated blood

all over the lungs. Heart flabby and slightly hypertrophied. No clot in right side of heart. Columnae carnae of a pink & yellowish colour. right side a very small clot. Blood very fluid and of a dark black colour. Stomach full of a dark fluid, with some clots of blood. Mucous coat very much injected, thickened & softened. Intestines distended with gas; The Mucous coat very much injected. No ulceration or alteration of isolated follicles or Peyers patches. Liver of a light yellow colour very much enlarged & somewhat softened. Kidneys congested, & of a bright yellow colour. One of the kidneys was found in the pelvis just above the Bladder.
Spleen very much enlarged & softened. All the Muscles and fat were coloured with bile.

Emiline Johnson Cold. Entered the Hospital Sunday June the 17th. in the afternoon. Has been married. This woman is in a very bad condition to learn anything of her history.

Talks

Talks very inconsistently. Lived in Chesnut Alley between Pearl and Pine, not a very clean place. Patient knows of no sickness in the neighbourhood. Occupied a two story Brick House, slept in the second story on a bedstead. (I mention this because most of those who entered the Hospital affected with this fever, slept on the ground floor, on old pieces of Carpet.) the patients condition indicating the contrary, her dress being exceedingly filthy, & the dirt of two or three lines of thickness on the person. says her husband was sick at the same time. he was taken with a Chill, four weeks since, followed by a sensation of heat, pain in head back and limbs. She states that she nursed him, & was taken sick two weeks ago, and had precisely the symptoms of her Husband. Bowels open two, or three times a day, vomited daily present symptoms. Woman looks much emaciated and is very much prostrated, every Muscle is perfectly lax and she lies in Bed like a log.

Countenance expressive of much anxiety. Eyes jaundiced. Lips dry and cracked. Tongue of a bright yellow in the middle, and red at tip and edges. Skin cool and clammy. Pulse 80 and very weak. Brandy ℥ vi

Monday June 18th. Patients condition evidently worse. Sinks about the 24th. Pulse weak and very slow. easily compressed. Some slight delirium. Patient died at 4½ P.M. Autopsy two hours after death. Lungs fibrinous adhesions to the pleura costalis — Right lung. upper lobe small point of pneumonia. in the second stage. Crepitant in the other parts. Left lung nothing remarkable about it. plenty of old pleuritic adhesions every where crepitant, little post mortem congestion in the extreme end of lower lobe. Heart smaller & firmer than natural. No clot in the right side. in the left side clot smaller than usual. Blood fluid and dark coloured. Liver about the normal size. outer surface

of

of an Orange hue, much softened, Finger passing readily into it. cut surface also of an orange hue. blood exuding not only from the larger vessels but from the Capillaries. the ~~lower~~ surface of the liver resembling that of a lung in the third stage of pneumonia. peritoneal coat easily peeled off. Gall bladder distended containing about an ounce and a half of dark greenish bile. Stomach contains about a pint of fluid of a dark greenish color. Pointed injection of the Mucous Membrane, particularly about the Cardiac orifice. also thickened & softened. thickening seems to depend partly upon its diminished size. Spleen enlarged & adherent to the peritoneal coat of intestines, much softened. Intestines ecchymosed blood under the peritoneal coat. Mucous membrane of ileum softened, but not much thickened. No alteration of Peyers patches, or isolated follicles. Muscles tinged with bile —

It will be seen by a perusal of the foregoing pages, the Cases of Malignant Typhus Fever therein Contained, were characterized by their excessive severity in attack & progress, & universal fatality. These Cases were among the first which appeared at the Alms House, and according to the law of all epidemics were of course more fatal, than subsequent ones. The symptoms attending them during life and the post mortem lesions were far more intense and therefore better types of the epidemic, than those which occurred at a later period — It is not my purpose to enter into a lengthy discussion as to what was, and how this fever originated, it has been undertaken by another far more capable of doing justice to the subject than myself — some are disposed to look upon the Epidemic as one of Typhus Icterodes or our Common Yellow fever of the South. It is unnecessary to say that this could not be, the simple fact that Yellow Fever has not ventured so far North

for

for many years, the early season of the year when the Fever first made its appearance, and its attacking all almost exclusively the Blacks, "for the African Race is less liable to Yellow Fever than the Caucassian, the comparative exemption of Negroes from the disease has long been noticed" — These facts would be sufficient, had we no others to substantiate our proposition. That it was not Remittent fever, it is only necessary to look at the high degree of Contagion which characterized the fever, and the want of that constant and necessary feature of Remittent fever exacerbation or Remission. What could it be? It must be Typhus Fever, or some modification of it —

bt

3

An

Inaugural Dissertation

on

Uterine Hemorrhage

Submitted to the examination

of the

Provost Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by Dos S. Mullaughly.

Gentlemen

In conformity with the long established practice of submitting to the faculty a medical composition. I have endeavoured by indefatigueable exertions to delineate the various forms and symptoms of Uterine Hemorrhage. & after thus showing but imperfectly, I fear the first appearance and future progression of the disease, my treatment for the same, will give you, a more deffinite idea of my capability as a practioner. Without making any farther introductory remarks and hoping this article may afford, general satisfaction I will proceed with the subject

Causes.

It may be stated as an axiome in obstetrics which has almost no exception, that a well contracted uterus cannot bleed and all obstetricians habitually feel secure when they find the organ hard and of a small size. Nevertheless the state of contraction may soon be followed by so absolute a relaxation of the contractile force of the uterus that the gentlest infusion of blood into its cavity is capable of distending it again if that blood be prevented from escaping at the ostince or at the vulva. But if a coagulum of blood should fill the vagina and stop the mouth of the womb or if the napkin should be too strictly pressed against the genitae fissure preventing the escape of fluid therefrom the blood which flows into the womb will gradually distend it to that

degree that without losing a spoonful externally the woman may effuse enough blood into the uterine cavity to expand it very greatly and to cause fatal syncope. The influence of position in determining the momentum of blood in the vessels is well known to the profession but there are few cases where its is of more consequence to pay a profound attention to this influence than in parturient women. A uterus may be a good deal relaxed or atonic and yet not bleed if the women lie still with the head low, whereas upon sitting up suddenly such is the rush of blood down the colum of the aorta, the hypogastric and the uterine and spermatic arteries, that the resistance afforded by a feeble contraction, is instantly overthrown and volumes of blood escape with an almost unrestrained impetuosity. The vessels of the brain under such circumstances become

rapidly drained and the patient necessarily has a relapse of syncope which now and then proves immediately fatal. Those cases of sudden and fatal hemorrhage are very rarely met with.

Special Causes.

The irregular pathalogical contractions and rapid normal contractions of the uterus and its too rapid retraction may separate the placenta prematurely from the inner surface of the organ and produce a hemorrhage which is the more dangerous in proportion as the labour is less advanced. and as it known that phenomena are particularly manifest in cases where the uterus has been distended by dropsy of the amnios at the moment when the rupture of the membranes permits a large quantity of the water to escape or in cases of twins.

In the latter case hemorrhage may occur after the birth of the first child and then the life of the mother and that of the second child which is contained in the uterus may be compromised or it may appear after the birth of the two children then only the life of the mother is endangered — —

Lacerations of the neck of the uterus. The foetus can scarcely pass through the maternal organs without lacerating the neck of the uterus to a greater or less extent and if in this case only a little blood escape it is because the foetus obliterates the patulous mouths of the vessels which are exposed by the laceration of the neck in its passage.

The insertion of the placenta on the neck of the uterus is an almost constant cause of uterine hemorrhage.

M. Moreau explains instances of this insertion without hemorrhage. He remarks that these instances of insertion of the placenta without hemorrhage are all referrible to cases where the foetus had died often long before its expulsion. In this case in fact the uterine circulation is modified as follows: of all the blood going to the uterus to nourish the foetus only as much reaches as is necessary to the uterine circulation properly so called; the vessels diminish, some even are effaced; in fact the stimulus which solicites the blood to the uterus having ceased the circulation is so modified that but little or no hemorrhage occurs when the placenta separates. or in all cases if hemorrhage occur it is very slight.

A chord where the vein is varicose in many parts and presents especially in one

of its points a swelling which seems to be a collection of blood the organised clot of which around the vein compressed it on all sides. I attribute the death of the foetus to this compression. We can see that if the vein may rupture and permit blood to be effused into the sheath of the chord this sheath also may be ruptured and give rise to hemorrhage which is serious to the child and mother. M. Denay has observed one where the vein was very varicose in almost the whole of its extent and had discharged a great quantity of blood — — This accident may also cause a hemorrhage within the ovum and an external or intra-uterine hemorrhage according as the membranes are entire or broken. according as the neck of the uterus is or is not closed by clots. —

Diagnosis

Hemorrhage sometimes appears suddenly even when not caused by external violence. but most commonly the female feels a weight and sensation of head trembling in the pelvis, dull pain in the loins and thighs and uneasiness in all the limbs. Sometimes also the local symptoms of plethora are attended by general symptoms, that the patients face is flushed, she feels a dizziness and headache, the pulse is full, developed. slow &c —

The precursory symptoms appear a longer or shorter period before hemorrhage occurs the symptoms which announce the actual existance of this accident are as follows. General signs. Weakness of the pulse. paleness of the face. coldness of the extremities, ringing in the ears finally all the symptoms of hemorrhage which generally occur. — —

The local signs are also distinguish

into two classes according as the hem=
orrhage is apparant externally. external
hemorrhage, or when the discharge of
blood does not appear external hem=
orrhage internal it the result —
External Hemorrhage. The hemorrhage
itself is its own symptom. Accouchers
generally attempt to ascertain exactly the
cause of hemorrhage in order to establ=
ish the diagnosis. This seems to me to be
perfectly useless for whether the hemorha=
ge be occasioned by the insertion of the
placenta over the orifice or its premature
separation &c. the indications will be
varied only by the lightness or severity
of the accident. farther this persistance
in establishing the diagnosis may be att=
ended with serious consequences: examina=
tions by the finger may separate the coag=
ula and increase the hemorrhage or re=
new it if it had been checked — —
Nevertheless if by great care in this —

investigation the accoucheur detect in the neck of the uterus a spongy and soft substance, if the membranes be entire and the hemorrhage increase during uterine contraction it must be attributed to abnormal insertion of the placenta on the neck of the uterus — — If on the contrary it arise from the separation of this body, the hemorrhage increases only between the pains. It is less during contraction and the placenta is not felt at the orifice. After the rupture of the membranes these differences in the increase or diminution of the flow cease to be perceptible. In both cases the pressure produced by the head of the child prevents the blood from escaping during contraction. Also we understand the character of these signs and why that which seems the most positive, the presence of the placenta

may lead into error, because it is difficult for the accoucheur to distinguish the placenta from the clots which obstruct the uterine orifice — — — — — — — —

Hemorrhage from the separation of the placenta and even that arising from the insertion of the placenta over the orifice may be confounded with that coming from a tumour of the hairy scalp or from any other part of the foetus which may be ruptured.

Internal Hemorrhage. At an advanced period of pregnancy, even during labour a small quantity of blood may accumulate in the uterus and remain unobserved, but most generally, especially if the hemorrhage occur to any extent it appears externally by general signs which I have mentioned, and by the following local signs: there is greater resistance of the mass of the uterus, irregularity of its form.

coincided with its unusual and rapid development, and the cessation of its active motions — — — — — — —

During labour internal hemorrhage is most frequently preceded attended or followed by a slight discharge of blood externally. In this case the hemorrhage is both internal & external.

Prognosis

The severity of the prognosis varies in ratio with the quantity of blood lost according to the period of the labour when hemorrhage occurs, its nature and the causes which produce it. That hemorrhage will be more serious to the mother and child as the accident appears at a period of labour more remote from the moment when the dilation of the uterine orifice or that of the external parts will permit the spontaneous expulsion of the foetus or its extraction — In fact during the time required by these

parts to become properly prepared for delivery the quantity of blood discharged may endanger the lives of both mother and child. Internal hemorrhage is much more dangerous than the external, because it may give rise to a considerable loss of blood before it is indicated by any external symptoms and then when it is detected it is often too late to remedy it efficiently. Hemorrhage is a much more serious thing for the mother in the hospital than in the city especially when Metro-peritonitis is epidemic as discharges of blood singularly predispose to this terrible disease. When the hemorrhage has been very great without however distroying the life of the mother it affects the system severely. The female becomes much enfeebled, she presents all the symptoms of chlorosis and indigestion and the sight and hearing are affected. but

She rarely escapes those nervous head-aches which are so permanent and painful. All remedies for this are useless and it continues until the strength of the patient is restored by proper regimen, If the profuseness of the hemorrhage be equally fatal to the mother and child we must not think that the loss of blood operates in the same manner on both. The mother dies anemic. but the quantity of blood which is lost rarely endangers the life of the patient: unless the blood comes from the umbilical cord. The child dies from asphyxia as if the cord were compressed. Instead of being anemic and pale it is on the contrary red & violet as the autopsy we find all the veins gorged with blood as occurs in asphyxia —

General Treatment

When the accoucheur is called to a female affected with hemorrhage —

he must cause the patient to lie down in the horizontal position, remove the pillows and elevate the hips on a firm cushion, so that the chest may be lower than the hips. The chamber should be well aired and ventilated yet it should not be very light. The most perfect repose of body and mind is indispensable. Hence the female should be encouraged and the utmost silence and complete quiet should be preserved around her. The patient should be lightly covered as the upper part of the body, the feet and legs should be uncovered or protected only by a sheet. The rectum should previously be emptied by a cold enema or mild laxative, if the enema be insufficient and the drink should be cold lemonade, currant-jelly water

Slight hemorrhage before labour, I would recommend the horizontal posture, absolute rest, fresh air, cold acidulated drinks, diet, bleeding if there be symptoms of plethora and voiding the bladder & rectum.

Severe hemorrhage before labour, I would use the same remedies as above mentioned, except bloodletting, cold applications from the first and then ergot 36 grains in three doses, every ten minutes, if these means fail I would apply the tampon.

In severe hemorrhage during labour same remedies as first mentioned, then astringents, ergot if pains be weak and feeble and the and the alum wash injections. If the orifice was dilated and the head had descended into the pelvic cavity, I would apply the forceps. If the pelvic extremity presented

simple delivery. Slight hemorrhage during labour I would apply the same remedies as first mentioned, except bloodletting which is always proper when plethora exists, if pains ~~slow~~ feeble and slow I would give ergot.

An Inaugural report
Of four Cases Submitted to the
examination of the Provost. Regents.
and Faculty of Physic of the
University of Maryland
for the degree of M. D.
By H. Rowland Walton
Annapolis
Maryland

Michael Pyfer — a german, thirty six years of age, a native of Germany Emigrated to this Country a year since, with his mother and brother. his Father died in Germany of Consumption. He states to have been in the enjoyment of good health always hietofore. He presents a medium stature, a well and regularly developed frame, and apparently a vigorous constitution — says that he has never been the victim of intemperate and vicious habits. his personal appearance is somewhat prepossesing. Features of the face regularly proportioned, with an intelligent and expressive countenance. Hair brownish black, and dark eyes. He entered the Hospital yesterday Nov. 6th 1849 — says that he has been engaged as a Blacksmith in Baltimore near Ratt street — always according to his account to have had a sufficiency of food. He was taken sick about eight days previous to his Entrance, without having experienced any undue exposure to weather. The commencement was marked by a chill, a universal sense of fatigue & uneasiness.

By general weakness and an incapacity to pursue any mental or physical employments He suffered from cerebral derangement as pain a sense of lightness and buzzing occasionally in his ears & loss of appetite. Had Epistaxis on the day of his attack and was repeated every day subsequently a small quantity at a time. he vomited also in the begining, and had some gastric irritability. Has had diarrhoea from the onset of his attack which caused him to have three stools daily. And was treated by a Dutch Physician in town. His present symptoms show a great deal of debility. If he attempts to walk his course is uncertain and tottering. he complains of headache ringing in his ears and partial deafness. his answers are slow but intelligently given and seem to suffer under mental Estrangement. Yesterday Nov. 8th and the eighth day of sickness presented on examination of his abdomen and back rose spots well marked and disappearing under

pressure - varying in size from a pins-head to four times that size. To day his skin is hot. pulse decidedly of some volume but compressible. has considerable throbbing of his carotid arteries. Countenance anxious with apparently the forbodings of evil depicted upon it. Has had slight hemorrhage from his nose during the day and his nostrils were covered with a sanguineous crust about their openings. Eyes not much altered if any in the anatomy of their tissues. but exhibit a wild expression. Cheeks somewhat flushed of a dusky hue. Tongue is red at its circumference and slightly smeared with a whitish fur in the centre. protrudes readily and without tremor. Appetite deficient. Thirst considerable. Vomited during the day especially after draughts of water. Owing I presume to gastric irritability. Has epigastric tenderness. and tenderness in Ileo Cæcal region with gurgling. The abdomen presents no unusual amount of distension but is quite resonant on percussion. Has had five

liquid dejections today - Respiration accelerated - percussion elicits a resonant sound - The sonorous ronchus is heard in the inferior and posterior surface of the lungs - He was prescribed for yesterday by Dr Bayley - who gave the following ℞ - Hydrarg. cum Creta ʒi. Pulv. Ipecac. grs iij. Pulv Dover grs xij. m - ft. pil. xij - S. one every 4th hour also - ℞ - Potas. Citras ʒiij - aqua ℥vi - S. Tablespoonfue in the interval of pills - and arrow root morning & night - Chicken soup for Dinner.

9th of Nov. During the night he manifested a great deal of restlessness. was delirious and walked about the room talking incoherently - It was difficult to keep him in bed and he passed the night without any sleep. This morning he lies prostrated, presenting an air of great anxiety - He answers questions correctly though slowly. moves in bed with difficulty - Skin hot pulse dichrotic. moderately full and frequent at 112 p.m. - Complains of pain in his head and ringing in his ears - Face flushed

Eyes showing a slight sanguineous injection
bled from his nose this morning - no appetite -
great thirst. drank some Coffee this Morning -
his abdomen is as it was yesterday - had
one dejection this morning of a liquid and
yellowish character - Complains of pain in his
back - general feelings of lassitude - Tongue ex-
tremely red and dry - hands tremble slightly when
uplifted - and says he feels well and wishes to
go home. At 5 o'clock P.M. the patient suffered
from cold - especially down his back and legs -
his skin however imparted to the hand a sense
of warmth - His senses are confused and he was
very delirious during the day - leaving his bed
suddenly and staring in the faces of those asleep
and placing his hands upon their faces causing
them to awake with fright which he did
effectually. as they knew him to be delirious,
he also manifested a great degree of strength
during his mental oblivion - During the
evening he had several stools - pulse was

frequent, small and compressible - numbering 120 p. m. Had four cups applied over right Iliac region - was fastened to the bed during the night but showed no signs of sleep. 10th Can lie in any position he is placed. Countenance expressive of much suffering - Skin as usual - no change in his eyes - Epistaxis several times to day - Respiration. 32 - pulse 125 sonorous ronchus - Tongue unchanged - Some meteorism and gurgling in Ileocecal region had two evacuations this morning - Some muscular irritability and subsultus - says he feels very tired - slight cough - slept some towards evening - 11th Patient says that he feels no better - much fatigued and feels almost void of animation - was delirious last night - he answers correctly - sobs when referring to his sufferings. Pulse as before - Expectoration is of a viscid mucus striated with blood - Sibilant ronchus is audible in his lungs - Respiration increased to 35. Lips dry - Tongue the same, some -

what tremulous on protrusion - his appe-
tite is better. two stools this ~~morning~~ last
night of a yellowish color and very offensive.
12th Patient says he is better - Expression more
tranquil - some tenderness about his head. Skin
moderately warm and dry - Pulse alike. Senses
are perfect - Tongue red and dry showing two
transverse fissures - slightly tremulous on
protrusion - Appetite improved. thirst con-
siderable - Abdomen in the same condition -
he failed three times out of six to evacuate
his bowels. 13th Patient about the same -
with slight pain in bowels - during the day his
senses were good. but at night they became con-
fused - Dr. Bayly ordered him to be blistered
over the abdomen - Pulse and skin as before.
14th Does not complain of ringing in his head &
ears - had slight muttering last night. lips dry and
disposed to sordes. Tongue generally red - pulse small.
Medicines prescribed were discontinued ex-
cept. Citrate of Potash - & the following ordered -

℞ Spiritus Mindereri ℥vi - Sulph. Quinie grains xij. Mx - S. Tablespoonful every 4th hour..
13th In the morning his senses were good, but became confused towards evening - Countenance rather better - Tongue in a more improved condition, it is moist and slightly smeared with whitish fur. had two passages - rather fœtid - Condition altogether better.
16th Patient is pretty much the same.
17th Pulse 95 and dichrotic - Bowels open freely - no tympanitis - Appetite improving. Skin moist. 18th and 19th he seemed to be much better, bowels free rather liquid. his medicine is continued - Patient went on to improve rapidly and was finally discharged well on the 28th.

Charlotte Newbury, a white woman aged thirty nine years. Entered the Hospital June 24th 1848. She is of medium size, a tolerably stout frame, and appears to have had a good constitution. From all that I could learn (for she was unable to give any reliable account of herself and her husband who brought her here was drunk at the time) her occupations have been bad and demoralizing, was the subject of intemperate habits. Lived in old Town on the Point and generally attended the sales of vegetables. It appears however that she was first taken sick about one week previous to her admission, with a severe fever, headache and vomiting. Her present condition shows considerable stupefaction, and almost void of intelligence. Surface stained yellow universally, exhibiting a deep jaundiced condition. eyes have the air of great dulness of expression, and are much injected with blood. position

in bed is that of great prostration. Pulse exceedingly small and frequent numbering 120.. skin cool relaxed and clammy. Respiration accelerated. imperfect at the back and lower part of the chest, which is also dull on percussion. has considerable dyspnœa. Lips and Tongue are smeared with a dry and thick fur. sordes on the teeth. bowels are constipated. with great tenderness over the Epigastric and hypogastric regions. On her legs several spots of Ecchymosed blood or Petechiæ are to be seen presenting a dark appearance. some are small of a bright red, situated upon her breast and shoulders. owing to dysphagia she was unable to take any of her Medicine.

<u>Post Mortem</u> appearances twelve hours after death. Conjunctiva of the eyes and skin universally tinged of a deep yellow hue. Rigidity of limbs and flabbiness of the Muscles. Incisions presents yellowness

in all the tissues.

Chest – Lower lobe of left lung partially crepitant and passively engorged. One half of the upper lobe passively congested, the upper half crepitant and emphysematous. Upper and middle lobes of right lung crepitant and with some old pleuritic adhesions. Lower lobe splenified.

Heart – Muscular structure very flabby – large clots occupying the right ventricle, auricle and into the pulmonary veins. No trace of clot in the left ventricle – Mitral and Tri cuspid valves of a pale orange hue.

Abdomen – Spleen is twice its normal size – Capsule readily detached – Consistence about normal – The liver is of natural size, of a pale yellow on its outer surface running into a light blue at its inferior margin and mingled with red and pinkish colors – Capsule easily detached – Cut surface of a pale yellow, with red lines in its vascular

network and surrounding the veins - A quantity of red fluid, resembling pale Cherry Cordial, exudes from the cut surfaces when pressed - there are some points of Ecchymosed blood under its peritoneal investment. Parenchyma somewhat softened flabby but not remarkably friable.
Lobes surfaces are less granular in appearance than that of health. Gall Bladder very much engorged viscid bile adhering to its walls, but that which occupies the centre is fluid.
Stomach contains a half pint of fluid resembling oat meal gruel, but rather darker in colour. Mucous coat slightly injected about the cardiac extremity moderately softened and not much thickened. Kidneys are healthy slightly tinged yellow and their Capsules are more readily detached than ~~from~~ in most diseases.
Intestines - There are two patches of red injection on the free mucous coat where

it emerges from the Cæcum into the Colon. These patches are covered in their centres with organized lymph. The glands of Peyer and Brunner are perfectly healthy. there is some slight arborescent injection of the Ileum. Not at all mammillated. —

William Faley, aged twenty five years, admitted into the Hospital Jan. 17th 1850. Of medium height, well built, bilious temperament, dark complexion, coarse features, black hair, gray eyes, born in Kerry county Ireland. Labourer by trade. food and clothing has been generally good. In childhood had Varicella, but has never been sick since, of importance until now. Arrived at New York Dec. 31st - 48. in the ship Philadelphia from Liverpool, with six hundred Emigrant passengers on board. Their sufferings from hunger and thirst were such as he never witnessed before, a few children and an old man suffered indescribably, does not recollect of any of them being sick with ship fever.

Came to Baltimore Jan. 5th from New York, & went nine miles out into the Country where he was exposed a great deal to wet and cold, at his work on the Rail Road. Was first taken Jan 9th with Coryza & Cough,

pain in the back and limbs; and head-ache, followed by a slight Chill and fever, from which time the disease grew worse.

Thursday Jan. 17th 7 o'clk P.M. Dorsal decubitus, flushed face, anxious expression of countenance, skin hot and dry; petechiæ scattered over its whole surface, more numerous on the back and abdomen; several large ones on the dorsum of the left foot and on the upper part of Thorax left of the median line, near the origin of the pectoralis major muscle; Eyes suffused, tongue dry, covered with a dark coloured fur; gums natural; hearing dull, springs up suddenly when spoken to in a mild tone, and stares wildly at you; respiration accelerated, pulse quick full and compressible, bowels constipated. Urine small in quantity - Ordered sal. Rochelle ½ oz. to be taken at bed time.

Friday 18th 8½ - A.M. Tongue not so darkly furred as last afternoon - bowels were evacuated -

Symptoms otherwise continue the same.
℞. Spt. Æth. Nit. ℥ss - Liq. Ammon. Acet. ℥ij.
Syr. Limonis ℥ij. M. S. Tablespoonful every
3 hours.
6½ P.M. Considerable deafness; tinnitus aurium,
slight stupor. Tongue fissured transversely
and tremulous; skin hot but somewhat moist.
Sleeps nearly all the time without being
refreshed, no nausea, no pain or tenderness
anywhere on pressure or without it, Con-
tinue treatment. Dr Barsley ordered Coffee
for Breakfast and Supper, Beef tea for Dinner.
Saturday 18th 10. P.M. Skin hot and dry at.
Petechiae near the pectoralis muscle and on
the dorsum of the foot fading - Many of them
on the abdomen and back are replaced by red
spots vanishing under pressure. On the
dorsum of the right foot and second toe
are two well marked petechiae - Eyes not
as much suffused, ringing in the ears
and deafness continue, lips dry and coated

with a brownish matter, fetid breath, abdomen tympanitic, bowels open last night. drowsy and weak, respiration easy. pulse ~~strong~~ frequent and feeble. Continue diaphoretic Mixture.

Sunday 20th 8 A.M. Complains of being very drowsy, respiration slow. pulse quick and feeble, skin hot and moist; petechiae of a light hue, pupils dilated, tongue moist, red at its tip and sides, bowels not open since Friday night. Continue Mixture.

℞. Magn. sulph. Sodae et Potass Tart. āā ℥iij. m. ft. pulv. S. at once.

Monday 21st 1 P.M. Tongue cleaner in the middle. Eyes glassy, hearing dull, answers questions slowly, bowels open twice to day, no tympanite pulse feebler & quicker. slight Cough. Ordered Sulph. Quin. grs. xij to be added to the Mixture.

In consequence of necessary absence the the case was not noted on the 22d and 23d.

Thursday 23th Decumbency often on either side; slight emaciation. petechiae and rose

Spots disappearing, hearing improved, no tinnitus aurium. Eyes not suffused. Tongue dry. pulse weak. Former mixture was discontinued, and the following was ordered by Dr Bayley. ℞. Spt. Mindereri ℥vi. Sulpt. Quin. ℥ss mp. S. Tablespoonful every 6 hours.

Friday 25th Patient feels very weak, Considerable emaciation, skin moist & warm, petechiae disappeared from dorsum of right foot and toe, tongue moist and slightly furred white in the centre, respiration natural, soft pulse, bowels open. Continue treatment.

Monday 28th Petechiae disappeared entirely from the surface of the body, skin cool and moist, bowels open once daily, urinates freely, slight deafness & ringing in ears. The Quinine mixture was continued. From this time he went on gradually improving untie the 2d of February when he was finally discharged Cured. —

Thomas Banks a colored man twenty-six years of age was occupied in the carriage of goods from store to vessel and vice versa. His constitution heretofore has been good and accustomed to temperate habits. Entered the Black Hospital March 18th 1849 with the following symptoms viz. States that he has been sick for eight or ten days from ~~the~~ exposure to bad weather. it commenced with a chill ~~and~~ followed by a severe fever and subsequently has been much troubled by a dry cough attended with a diminished voice. Vomited several times much bile with other matter which was apparently produced sometimes by copious draughts of water. Bowels constipated. Complains of pain in his right hypothondrium. Appetite entirely lost great feelings of uneasiness which similates that followed by much muscular exertion. Has slight headach. Offensive breath dry and hot skin, pulse accelerated and hard. Tongue covered with a thick yellowish-

Coat of ~~white~~ fur. and is a little red at its tip and edges. Eyes are injected with bilious matter: Skin tinged yellow; Urinates freely and highly coloured.

Treatment: Ven. sect. Oiss. abstracted in a full stream. an injection composed of Ol Ricini ℥ij. Ol Terebinth ℥ij aqua Oi ss. Also Hydrarg. Prot chlor ℥ss. Pulv Ipecac gr iv. Ext. Conium grs v. m ft. pil. no. vi. S. one every 4th hour.

20th. Patient expressed himself much relieved from the abstraction of blood last night: it presents on examination this morning a cup like depression of a stiff tenacious coagulum. and well developed buffy coat. there is not more than an ounce of serum.

The enema was followed by a copious watery evacuation which also seemed to ease him for a while. He slept very little last night. this morning, he has a dull heavy expression. answers questions slowly but intelligibly. says he has no bad feeling about his

head other than when he stoops things that he sees appear to be greenish. Pulse frequent about 115 pr. min. and hard, Skin hot and dry. Tongue dry and yellowish in the middle and red at its tip and edges. is very pointed on protrusion. Appetite deficient. Vomited twice last night which he says was bitter as gall. a full inspiration gives him slight pain in the right side. Cough not so troublesome & expectoration of no value. Nor is his breath quite so offensive. This evening Dr. Bayly saw him and ordered six cups to be applied over his abdomen & right side, also Calomel & Jalape ãã grs XV. s. at once. his former pills being exhausted their further use was discontinued.

21st Patient says he was greatly eased by the application of the cups. The purgative acted most freely. Stools are thin of a greenish hue. has considerable fever with a hot and pungent skin. Ordered him the following

℞. Hydrarg. sub Mur. grs XV. Pulv. Opii grs ij m
Ut. pil. V. S. one every 4 hours.

22d. Last night being restless and the patient
~~and~~ complaining greatly for want of sleep I gave
him a Dovers powder. Though I knew its effects
were contraindicated by slight cerebral determination.
His condition appears to be better generally.
Is clear nearly of fever - pulse almost resumed
its normal standard amounting to about eighty
per minute - with a cool relaxing condition
of his skin - had a refreshing and undis-
turbed sleep last night and a tolerably free
perspiration - says he begins to feel natural
again, with the exception of slight pain in
the region of his liver, and aching pains in
his extremities - a very little giddiness of head -
Eyes are not so much jaundiced - and coun-
tenance calm and unruffled - Tongue still
covered with a brownish white fur about half
moist and half dry - exhibiting a disposition
to clear itself. Appetite better & bowels clearly open -

Respiration about natural - Expectoration of no importance and cough declining. The pills ordered last are now suspended. & ordered - R. Infus. Serp. Oi - S. Wineglassful three times daily.

23d. His appetite continues to improve and longs to devour some substantial food. Complains of general weakness and soreness in his larger articulations - Tenderness on pressure in right hypochondrium not complained of. Urinates freely - and bowels well open. Is taking only the Inf. Serpt. to assist nature in her efforts to restore him to his physical glory and strength.

24th & 25th - No cerebral symptoms present. Eyes are still intensely injected - and skin tho of an African nature has a yellow tint. No soreness produced by pressure of the liver. Dysphagia in a moderate degree. Tongue more pread than previous - covered slightly with whitish fur. Bowels loose. pulse a little quickened.

Urinates freely high coloured. There is still soreness in his limbs. His urine lets fall a large quantity of deposit of yellowish white appearance on standing. Nitric Acid causes a red deposit in the mixture. Heat produces no change. and the introduction of ammonia causes the subsidence of a whitish deposit. also a piece of linen placed in it and then dried. presents a yellowish tinge.
To day I ordered Blue Mass & Calome āā gr X. S. as one to which his bowels responded after a few hours. also Bi Carb Soda ℥i. ft. ch. no. viij. S. One twice daily. In order to see whether or not with its other effects it would effect a change in the blood. and thereby obviate the elimination of this secretion which is unnatural to healthy secretions.
2d 6th. His gums are a little sore and spits a good deal. there is a dull pain about the boundary of epigastric region which seems to annoy him somewhat. he rested well

last night. Tongue is elongated & clean. Complains of shooting pain in back part of his head which occasionally passes over to the os frontis. Circulation in a state of partial Quiescence.

27th & 28th. His Condition is not greatly altered. his appetite does not exactly deserve the Epithet of convalescent voracity. Eyes look greenish yellow still. Mouth sore still from being Mercurialized. Prescribed — Hydro. Chlor. acid ℥i. aqua ℥viij. m. for Mouth wash. Pain about Epigastrium, for which he was blistered.

29th. No unusual symptoms present themselves today. His Urine has been of an extremely high Colour. and presents the same peculiar sediment. and there appears to be no diminution of excretion or secretion of Urine. therefore the soda could have had little or no effect upon it.

30th. His symptoms are all favourable and appears to present a speedy recovery.

31st and 1st of April doing very well.
On the 2d he was walking about the room, regained his strength daily until he was discharged from the Hospital cured on the 6th of April - Seventeen days after his admission. ——

The second case is one of Malignant Typhus Fever, brought to the Alms House during the height of the prevalence of that Epidemic among the Blacks, Tho this Epidemic was characterized principally by its being confined exclusively to the Negro Race, but this being so nearly allied, we may almost say a "fac simile" of the Negro fever, and its occurrence at that particular time, accompanied by one of the marked conditions of the Negroes, the (profuse Jaundice) would justify us in placing this case as one precisely similar, occurring under the same law, only modified somewhat by its occurrence in a

White Person - The post mortem appearances of this case, by comparison with those reported by other Gentlemen from this Institution, will be found to be identical. The anatomical lesions present a striking similarity to those cases, as occurred among the Blacks, particularly the condition of the large viscera of the abdomen. viz. Liver. Spleen &c -. We labour under some disadvantage in this case, as the condition of our Patient and her loving Spouse was such as to exclude all means of learning from them her history, as to whether or not her attack could be traced to direct exposure or contact with some of those Black cases. The treatment in this case was conducted on the same principles as the others —

There being no Autopsies to the other cases, I have no remarks to make, but respectfully present them to your perusal for their intrinsic worth - and at the same time hoping they may meet your universal approbation.

An inaugural Dissertation on

Amnesia

Submitted to the Examination of the Provost, Regents, and Faculty of Physic of the University of Maryland

by

Richard Ireland Dorsey
of Baltimore
Md

March 1850.

An
Inaugural Dissertation
on
Uterine Hemorrhage
submitted to the examination
of the
Provost, Regents and Faculty of Physic
of the
University of Maryland,
for
the Degree of Doctor of Medicine
By
John J. Bruce
of Allegany County
Maryland

To

Richard H. Thomas M. D. Professor of Obstetrics and the Diseases of Women and Children, in the University of Maryland the following pages are respectfully inscribed.

By The Author

From the multiplicity of subjects on which to write a thesis, which is demanded by the rules of the institution from each candidate for graduation, I have experienced not a little difficulty in selecting one as being more appropriate and better suited to the occasion than another. Though all of them afford ample room for study and observation, and demand of the medical student his most scrutinising attention, yet there are none which have not engaged the attention of the most profound and scientific members of the profession, and on which he, inexperienced as he must necessarily be, could presume to offer any originality of idea. This is not required of him, nor is it to be expected, for all of the information which he possesses on any medical subject has been obtained from the experience of others and from a very limited observation entirely insufficient on which to ground an opinion. Therefore, in complying with the demand

which is made upon him, he should consult all authorities on his subject, and obtain all the information on it within his reach, then present in his own terms the views which appear most in consonance with his own reason and judgement of the subject. With these views I have chosen Uterine Hemorrhage as the subject of my inaugural essay, considering it as one, of the utmost importance, and than which there is none that requires to be more thoroughly understood by the medical practitioner. There is certainly no disease which requires at his hands more prompt and energetic action, and during the management of this, to delay or to manifest any alarm or ignorance, would, in all probability, be to forfeit his reputation and the trust reposed in him, with the life of his patient. To treat such cases successfully he must possess the confidence of his patient. To obtain this he must maintain his calmness and self-possession at all times and under all circumstances, in the sick chamber, and to do this, he must thoroughly understand the disease

with which he has to contend, and meet it at every turn with appropriate treatment.

In treating of Uterine hemorrhage, I shall consider it successively, as it occurs previous to, and after the birth of the child, and in speaking of that which occurs previous to birth I shall adopt the practical distinction first made by Dr Rigby, into accidental and unavoidable, hemorrhage, as it is necessary that the discharge be referred to one or other of these sources in order that the proper method of treatment be decided upon. I shall in the first place then consider accidental hemorrhage

This is liable to occur at any time during Utero-gestation. That which accompanies abortion I shall speak of seperately from that occurring in the latter months, as their management may differ somewhat, and by thus dividing the subject, we will be able to point out the treatment appropriate to each. I shall not enumerate the many theories which have been promulgated from time to time of the changes which take place after impregnation

but it is sufficient for our purpose to know that after the Ovum has arrived within the Uterine cavity a vascular connexion takes place between the Chorion and decidua at the portion of the Uterus against which the Ovum lodges, and this determines the seat of the placenta, which does not become fully formed until about the fourth month of gestation. After this connexion between the membranes is established, any thing which tends to produce a separation of them must cause a lesion of blood-vessels and of necessity hemorrhage. Now the immediate cause of this separation, and consequently of the hemorrhage, is always a contraction of the Uterine fibres. But there must be some remote or predisposing causes to excite this contraction. A variety of these have been enumerated by authors, as capable of producing this effect. Amongst the most prominent of these may be mentioned, Mechanical violence, as a heavy blow or fall, violent exercise and mental emotions of any kind, as excessive joy or grief, fright or anger. These are the most common exciting causes of abortion & hemorrhage at this

period of gestation. Though it has been known to follow much more trivial causes, in persons predisposed to it such, for instance, as violent straining at stool fatiguing walks, riding on horse-back, and it has even been produced by violent fits of coughing and vomiting and by acrid purgatives, especially such as stimulate the rectum and excite the Uterus sympathetically. The predisposing conditions which exert a powerful influence in producing abortion, are those of a debilitating nature, as general debility, or weakness of the Uterine organ.

Hemorrhage occurring during the early months of pregnancy is rarely so profuse as to occasion any alarm and very seldom, indeed, does it terminate fatally. As a general rule, certainly not without exception, the danger from hemorrhage is greater in proportion as pregnancy is advanced.

In treating all Uterine hemorrhages, the great indication is, to arrest the discharge and prevent its return. at this period of pregnancy, if the hemorrhage be not so profuse as to endanger the life of the woman, we should direct our efforts to the pres-

ervation of the Ovum. With this view, we should immediately on being called to the patient have her placed in the recumbent posture, and her apartment well ventillated. Absolute rest of every organ of the body is essential to her well-being. Her diet should be of the mildest kind and her drinks cool and acidulous, sedulously avoiding any thing in the least degree stimulating. The remedies to be used, are cold applications to the lower portion of the abdomen and pubes. Acetate of lead may be used with advantage, in doses of two or three grains, and repeated according to the urgency of the case, with opium in sufficient quantity to arrest the contractions of the Uterus if possible. If the hemorrhage be accompained with plethora and high arterial action, blood-letting has been found highly efficacious. To produce its beneficial effects it must be pushed to the extent of diminishing the action of the heart, and repeated according to the circumstances of the case. If these means fail, the tampon must be brought into requisition. This may succeed unless, in consequence

of the unabated contractions of the Uterus, the os tincae begins to yield and the expulsion of the Ovum becomes inevitable, which will very frequently be found to be the case when the discharge is profuse. We must now promote the evacuation of the Uterus as speedily as possible, in order that by its contraction the cavity may become closed and the hemorrhage checked. An examination must be made, to ascertain the condition of the parts, and the situation of the Ovum, which, if it is found protruding into the vagina, may be grasped & brought away if it is separated from the Uterus. If it should not be found within our reach, the ergot of rye may be administered, and if the hemorrhage be considerable the tampon must be had recourse to, in order to check it until the Ovum is in a condition to be expelled

Cases may occur in which, notwithstanding all of the above mentioned means may have been assiduously employed, we fail to arrest the discharge and the patient may be reduced to the verge of death. Under these circumstances, as a dernier resort, no time should be lost in extracting the Ovum by a manual operation. In this we

can generally succeed by introducing one or two fingers into the uterus and separating the attachments. This is by no means free from danger, and should never be thought of except in extreme cases. —— Accidental hemorrhage occurring during the latter months of utero-gestation is attended with infinitely more peril than that of which we have been speaking, and notwithstanding our best directed efforts to subdue it, it too often indeed proves fatal. It depends upon a partial separation of the placenta from the uterus, when it is attached to any portion of the organ except the cervix, and the degree of hemorrhage is generally in proportion to the extent of the lesion. Proceeding from the same immediate cause as that occurring in the earlier months, it can always be traced to one or other of the remote causes which I have mentioned. The discharge does not always manifest itself externally immediately after the lesion takes place, especially if this is at or near the centre of the placenta, but may be retained a longer or shorter time before it finds its exit. However a lesion may be suspected if, after any one of the remote causes have been in operation, the patient feels

uneasiness and tension in the abdomen with a dull, aching pain over the region of the Uterus, extending around to the loins, and this supposition is generally confirmed sooner or latter by the appearance of the discharge, which may be very trifling, or in such a quantity as to place the life of the woman in immediate jeopardy. In all cases where the latter of these two conditions does not prevail, and the woman has not arrived at her full time, it should be our aim to stanch the hemorrhage and endeavor to keep it in check until the end of gestation and to do this, the same regulations as to the disposition of the patient, her diet, drinks &c should be strictly enforced. The same remedies, to a certain extent, are applicable to the milder forms of hemorrhage occurring at this period as those which have been mentioned for the treatment of that occuring in the earlier months, viz. cold applications to subdue the force of the circulation, astringents to promote coagulation and opiates to favor sleep and overcome Uterine action. Blood-letting is not advisable at this stage, nor should I be tempted to use the tampon for fear of internal hemorrhage taking

place to such an extent as to destroy the life of the patient By the means above mentioned we may often succeed in controlling the hemorrhage and carrying the woman to her full time. But where we have to contend with an alarming discharge from the commencement, or when slight in the beginning, but has continued in defiance of the remedies proposed, it becomes our duty to resort to more active measures to rescue the woman from her perilous situation For this purpose, rupturing the membranes and evacuating the liquor Amnii has been proposed as a safe and effectual expedient; though it has been as strenuously opposed by some of our most eminent practitioners as it has been warmly advocated by others. From the testimony in its favor, and from the success with which it has been attended in the hands of those, whose experience affords them ample grounds for stating confidently its efficacy in these cases, I should be loth to proceed to force delivery without giving it a fair trial. This may easily be performed by introducing the finger into the Os Uteri which will almost always be relaxed after any considerable hemorrhage. After the operation the contractions

are increased in frequency and force by which the open mouths of the divided vessels are compressed and the discharge checked. Ergot may be administered at the time of rupturing the membranes if the urgency of the case demands it. But that even this will fail to excite sufficient uterine action, in some cases, to stanneh the hemorrhage, and expel the child as expeditiously as is desirable its warmest advocates admit, especially where there has been a copious discharge prior to the practitioners visit. To turn and deliver, under these circumstances, is the only resource left us, by which we may hope to afford the woman a chance of safety — We may occasionally meet with one of those rare cases in which, notwithstanding the profuseness of the discharge, the Os Uteri may remain rigid and unyielding. This is the only circumstance which would induce me to use the tampon at this stage of pregnancy, in a case of accidental hemorrhage, preferring it here only to forcing the hand through a rigid os uteri, thus choosing the least of two evils ——

We come next to speak of one of the most dangerous complications to which the parturient woman

is subject, and one, for the relief of which the efforts of nature are almost entirely inadequate, and even under the most judicious management, is probably more fatal than the most direful pestilence that infests the human family. I refer to Unavoidable hemorrhage. This occurs in consequence of the implantation of the placenta entirely or partially over the orifice of the Uterus, and is properly called unavoidable hemorrhage because, from the situation of the placental mass, the expulsion of the foetus is impossible without causing a greater or less discharge of blood. It is liable to occur only during the last three months of pregnancy, because, until the sixth month of gestation or thenafter its cause is not brought into action, which is, the gradual expansion of the neck of the Uterus for the accommodation of the foetus in consequence of which a separation is forced of the placenta from the Uterus and hemorrhage of necessity ensues. It may happen that no discharge takes place before the period of gestation is completed, owing probably to the growth of the placenta being proportionate to the development of the cervix, but in the majority of cases

we have one or more discharges prior to this period. A sudden gush of blood taking place without any apparent cause, is the first circumstance which would lead us to suspect so dangerous a complication; for we are told that it may occur whilst the woman is performing her ordinary domestic duties or even during sleep. If these discharges are not copious and are unaccompanied by pains, by proper management she may be carried safely to her full time, but should the hemorrhage become alarming and be attended with pain, indicating uterine action, no time should be lost in endeavouring to ascertain the nature of the case, whether it belongs to the accidental or unavoidable class, for on a correct diagnosis the life of our patient may depend. For this purpose an examination "per vaginam" should be insisted upon, and if the placenta presents it may be felt at the mouth of the uterus. A coagulum of blood which may have formed there might be mistaken for the placenta, but from this it may easily be distinguished by its firmness and the resistence which it offers to the finger, and by adhering to the parieties of the uterus. A valuable diagnostic

sign between these two species of hemorrhage is, that in the accidental the discharge is checked during a pain, whereas in the unavoidable the opposite of this prevails.

I can not imagine a more trying situation in which a young practitioner could be placed than in the management of a case of unavoidable hemorrhage. Inadequate as I have stated the efforts of nature to be, in the vast majority of cases, for the relief of the patient; he can contemplate the awful responsibility which rests upon him, when he considers and feels that her chances of life or death are in his hands. Though many such cases are beyond the power of man to save, yet this serves only to demonstrate how thoroughly the subject should be understood by every practitioner.

He may be called to the patient frequently in consequence of the alarm occasioned by the discharges which are the result of the unfolding of the neck of the uterus, but these are seldom so copious as to require any interference, and as I have before stated, by proper management the woman may be safely conducted to the end of gestation. It is very seldom that any thing more is required to be done than to calm the mental agitation and direct her to observe

perfect rest and quietude, and afford her nutritious but unstimulating diet. Here it is that the tampon comes to our aid with signal benefit. We have here nothing to fear from its use, for internal hemorrhage is prevented from taking place to any great extent, owing to the peculiar situation of the placenta. On a recurrence of the bleeding under the same circumstances the same regulations should be enforced directing always to be sent for immediately on its supervention, for we know not at what time the pains of labor may come on, and the hemorrhage become so profuse as to place the patient in a most critical situation. When this takes place our interference is most urgently demanded.

The indication is undoubtedly to effect delivery, but at what time and under what circumstances to attempt it is the difficulty with the inexperienced. Immature interference which is very apt to be made by the young practitioner in his anxious endeavours to relieve his patient is highly injurious, and to delay rendering assistance until she becomes so prostrated from the effects of the hemorrhage, as to render her case hopeless is equally to be deprecated. We will generally find the os tincae somewhat dilated, especially

if the hemorrhage has been considerable. If this is the case not a moment is to be lost for fear of fatal prostration. The hand is to be introduced and as gently as possible insinuated between the uterus and placenta at the point where it meets with the least resistance until the membranes are reached. These are to be ruptured and the hand passed along the person of the child until it reaches the feet, which are to be seized and brought down. Herein consists an essential difference between the management of this and the accidental hemorrhage, in which we have seen that puncturing the membranes is in most cases sufficient to check the hemorrhage; whereas in the unavoidable this alone would only aggravate the existing evil by increasing the discharge at each contraction of the uterus. It might naturally be supposed that forcibly separating the placenta from the uterus would increase the hemorrhage but this is in a great measure prevented by the pressure exerted upon the ruptured vessels by the hand and arm of the accoucheur, and after their removal, by the body of the child. After the feet have been brought down we must not endeavor to extract the child too rapidly

on the contrary, after this has been accomplished, we may generally allow the labor to proceed naturally, always using the ordinary means to promote contraction. The case may be presented to us under the following circumstances By the time we arrive at the bedside of our patient we may find her in a state of utter prostration from excessive loss of blood. Under circumstances such as these, although we will always find the mouth of the Uterus fully dilated, to proceed to deliver her would be to deprive her of the little chance of safety which she would otherwise have. Stimulants are here clearly indicated, by which we should endeavor to raise the system to such a degree as to insure perfect uterine contraction. When this is attained delivery may be proceeded with. In those cases in which we find the Os Uteri rigid and unyielding, notwithstanding the hemorrhage, the mode of proceeding which would naturally suggest itself to the mind of the prudent practitioner, would be to endeavor to arrest the hemorrhage untile the mouth assumed a more favorable condition, in preference to forcing delivery under such circumstances, which is one of the most hazardous

proceedings that could be attempted. Here our main reliance is to be placed in the tampon, which, when assisted by the ordinary anti-hemorrhagic regimen, we are assured, will succeed to our entire satisfaction. When this is accomplished we will proceed according to the rules heretofore laid down for the management of unavoidable hemorrhage ——— There remains yet to be spoken of the last division of our subject viz. Hemorrhage occurring subsequent to the birth of the child. This is probably of more frequent occurrence than either of the forms of which we have spoken, and consequently the one with which the practitioner will have most frequently to contend. Fortunately, however, it is less complicated, and the indications to be pursued are clearer to the inexperienced practitioner. Its source & immediate cause is identical with that of those forms of hemorrhage occurring previous to parturition, for we know that essential to hemorrhage taking place from the Uterus, is a separation, partially or entirely of the placenta from its parieties. There inevitably occurs after the expulsion of the

child a slight discharge of blood, for it is impossible that the uterus can contract so promptly thereafter and remain so firmly contracted as to prevent this to some extent, though this can not be strictly called a hemorrhage.

It is only when it occurs to such an extent as to awaken our apprehensions as to the safety of our patient, that it seriously concerns the medical man. Then it is that the power of our art, if judiciously employed, is, in the majority of instances most strikingly displayed. By it, we are often enabled to relieve those, who in its absence, must inevitably have perished.

When hemorrhage occurs after the child has been expelled it arises from insufficient contraction of the uterus to close the orifices of the vessels left patulous by the separation of the placenta. This is apt to occur from general debility, a long and tedious labor, and especially after a hurried labor are we apt to have flooding. This, therefore should warn us against interfering during parturition when it is progressing favorably. We should allow the fœtus to be expelled entirely by the uterus in order to insure its perfect contraction afterwards. Nothing contributes more to the prevention of hemorrhage after delivery

than the judicious management of the patient during the entire progress of labor. All stimulating food and drinks should be carefully avoided and every circumstance tending in the least to excite the circulation. It sometimes happens however, that notwithstanding the best management flooding will take place, and under whatever circumstances we meet with it at this period, our efforts must be directed to the procuring of perfect uterine contraction, for by this mainly can we hope to relieve our patient. In a word, her safety and speedy recovery are most intimately connected with the gradual and perfect contraction of the uterus. The means to which we resort to attain this end are simple and if assiduously applied are generally eminently successful. The mortality attending hemorrhage after delivery, as appears from the statistics of various authors, is infinitely less than either of the forms of which we have spoken, except, perhaps, that which occurs in the earlier months of pregnancy By applying the hand over the abdomen in cases of flooding the uterus will be found flabby and uncontracted. We must endeavor to excite it to action by frictions, by grasping it externally and applying cold, alternated with warmth to

the genitals. These in no case should be omitted, as they constitute our most efficient means of bringing relief to our patient, at the same time ergot may be administered, and if the case is obstinate, water poured from a height on the abdomen, and the introduction of ice into the vagina will be found very efficacious. If, by the above mentioned means, we fail in attaining the object so much desired, as undoubtedly we will sometimes in cases of atony of the uterus, the hand must be cautiously introduced and the placenta, if it yet remains and be found partially adhering must be separated; keeping always in view the invaluable rule, "arte non vi", which you have so often impressed upon us, and which is applicable here as it is in all obstetric operations. This will rarely fail to rouse the organ to action, and thus all danger for the present is obviated. It may be requisite to repeat it if the bleeding recurs, a second repetition will rarely be required. We should always bear in mind that the hand should not be too hastily withdrawn, but rather allow it to be expelled by the contractions of the uterus.

Various other means have been recommended, as cold and

styptic injections, galvanism and compression of the aorta, but we shall rarely if ever find it necessary to resort to either of these, if the others of which I have spoken be properly applied. After we have succeeded in restraining the hemorrhage a compress and binder must be carefully applied to keep the uterus permanently contracted and an opiate administered with a view to procuring perfect rest; after this has been accomplished we may confidently expect the speedy recovery of our patient.

I have now concluded my remarks on this interesting and highly important subject; having marked out the course which I should pursue in the treatment of the various forms of hemorrhage as they occur during pregnancy and parturition.

I respectfully submit them to your inspection, trusting that you will take into consideration that they emanate, not from one who is enabled to state facts as they have come under his observation, but from one, who, from inexperience, must rely upon statements recorded by others.

An

Inaugural Dissertation

on

Eremacausis

Submitted to the Examination of the

Provost, Regents and Faculty of Physic

of the

University of Maryland,

For the

Degree of Doctor in Medicine

By

W. H. Browne,

of Maryland.

"Was sie gestern gelernt, Das wollen sie heute schon lehren;
Ach, was haben die Herrn doch für ein Kurzes Gedärm!"

The material world manifests itself to us in but two principles, archetype forms to which all its motions, changes and ever varying metamorphoses may be reduced, and which indeed constitute the expression of Matter itself. Apart from these, Matter, if conceivable at all in the abstract, must be regarded as an inert, lifeless, passive, negative mass; utterly powerless to give the psychical world the faintest token of its existence; without form weight, color or consistence; for all these, its commonly admitted characteristics, are but phenomena of Attraction and Repulsion.

Each of these principles exhibits itself in four simpler forms which are all essentially the same; the one as Gravitation, Interstitial Attraction, Cohesive Attraction and Chemical Attraction; the other as Heat, Light, Electricity, and a fourth, which forms

a chief subject of the present investigation, and which is known as Vital Force.

The most impressive phenomenon of these principles, and the one earliest distinguishable, is the perfection of contrast which they exhibit; each in all its forms being the essential converse of the other, as well in its most complicated effects, as in its first and primitive law — the law of Radiation and Return, the law of Action and Reaction. And in their ultimate shape they may be described as two forces, the one impelling the particles toward each other with a force continually increasing in the ratio of the squares of the diminishing, the other urging them apart with a momentum which incessantly lessens as the squares of the increasing distances. And these two laws, so simple in their expression, so multinominous in their complications, are the eternal and inseparable laws of Material Existence: the rules by which the two antagonist Mights execute the infinitely changing Moves and combinations in the great Frame of the Universe.

No portion of these forces can ever be annihilated, nothing can destroy the exactness of their equipoise; they must exist coeval with the cosmical life itself:— The strength which rolled back the Persian from the rocky wall of Thermopylæ, is as actual now as that

which sinews the arm of a Kossuth; and the first-born ray of light lives on at this moment as lucid and as pure as when it peeped under the eyelids of just-awakened Nature.

Yet, though these two forces are thus equipoised, it is evident that they can not be everywhere uniformly distributed; were that the case they must counteract each other, and the universe would be fixed into a state of utter and eternal inertness; but it is constantly happening that one predominates at one point, and is proportionately deficient at another; and in this, power is manifested in some of the endless phænomena of Motion or Change. Or, on the other hand, when, in any point, the antagonist principles are exactly equal, they are mutually neutralized, and until a new accession causes one or the other to preponderate, they must remain in a state of rest. This condition is termed that of static equilibrium. In Astronomy, Physics, Chemistry or Physiology, these truths hold equally good; and in whatever forms we conceive or explore the appearances of Matter, these remain its immutable and archaic laws.

When these forces are thus in the state of equilibrium, their presences is not made known to us by any of the phænomena of Change; yet we must not for a moment leave out of sight the fact

that they are there present: as, e.g., in the case of a weight lying upon a table, though no force appear to be developed, yet its attraction toward the centre is opposing an equal force of resistance in the repulsion which keeps the particles of the wood from being condensed into a more solid mass. And if from any substance in equilibrio one of the forces, or any portion of that force, be manifested externally — employed upon some extrinsic body — the other, of necessity predominates, and a change is the result. Thus, supposing we have a volume of gas composed of particles of oxygen and hydrogen in the proportions to form water, no change is perceptible as long as these remain in equilibrio, and the attractive and repulsive forces counterbalance; but the instant we cause a part of the repulsive force to manifest itself externally, expend itself upon surrounding bodies in the form of heat, Attraction predominates and the result is increased density. Here then we may set this down as a law: when from a body in equilibrio either of the forces is caused to manifest itself externally, the antagonist force predominates and a change is the consequence. When the repulsive force is thus liberated under the form of heat, this fact is well enough expressed by the common formula: "Bodies passing from a rarer to a denser state give out heat." This law, with the exception

that the repulsive force is not manifested as heat, shall fall under more especial notice hereafter.

Nature, as it is termed, exhibits itself under three very different forms, which, although apparently blending into each other like the tints of the rainbow, are yet entirely distinct and peculiar phases: the Mineral, Vegetable and Animal Kingdoms. Of these the first is distinguished by its remaining in a state of almost perfect inertness; its attractions are powerful, its combinations simple, and its changes few and slowly proceeding. The second class is employed in appropriating Repulsion from without, using it to counteract the strong attraction so predominant in the mineral Kingdom, and forcing its elements from their simpler arrangements to cause them to enter into new and complex compounds in which this repulsive force conceals itself, and which, by means of it, acquire properties unknown to them before. The third class takes from the hand of the second these compounds, employs the power inherent in them on extraneous bodies, and allows the substances, deprived of that which held them in this forced state, to descend by a rapid fall to the simplicity of their first combinations. These two latter classes form the organic

world; and the power which the vegetable kingdom is employed in accumulating, and the animal in expending; which, in that, forces the elements of the atmosphere, of water and of carbonic acid to enter into new and in a manner unnatural combinations, and in these forms retains them, while, in this, it is expended upon other substances; which distinguished the one by the faculty of growth, and the other by the faculty of motion,- is what is meant by "the vital force", a power in itself essentially repulsive, and convertible into any other of its manifestations - Heat, Light or Electricity.

Here then arises the inquiry "What is the source of this vital force? How is it that the simple cell-germ, scarcely visible, even in the condition of the highest optical exaggeration, becomes in time a body containing countless millions of similar cells each one no whit less fraught with this power than was the original parent?"

The principle of the purely animal life is the direct opposite of the purely vegetable. The temperature of the animal organism is always above the surrounding medium; in the other it is always below it; thus in the one, heat (repulsive force) is constantly given off, and in the other as constantly taken in.

A green fruit, or one continuing to grow and mature, is always colder than one already ripe, which has ceased to increase, and in which the first process of its subsidence, the conversion of starch into sugar has already commenced. This difference is well marked in the lower temperature of a green field in the sunlight, compared with a field of stubble, notwithstanding the greater reflecting power possessed by the lighter color of the latter.

But not only is Heat absorbed during these vegetable processes, but another most powerful repulsive agent, Light, under the influence of which alone is the vegetable capable of accomplishing its peculiar duties, and with the total deprivation of which they cease entirely.

These compounds are not only formed from their primitive elements by the exercise of a certain repulsive force, and then left in static equilibrium; but they are actually kept and held in that state against the strong attraction of the oxygen of the atmosphere; and not until this power is removed, and the constituents left in equilibrio, can the attraction of the oxygen take effect, and the complicated molecule resolve itself into simpler combinations.

From our first stated principles it follows evidently that whatever power has been employed internally, or absorbed, in the process of a chemical change, as in the decomposition of Carbonic Acid or water, precisely the same power must be manifested externally when that change is reversed.

Here then we have two powers, the exhibition of which must accompany the descent of every molecule of organic tissue, and which, in this exhibition, amply account for two of the three great arcana of animal life: the third is yet shrouded in the abysmal darkness.

As the vegetable life is almost entirely a process of de-oxygenation, so its reverse, the animal life, is almost entirely a process of oxydation; each particle of glandular structure, of muscle, or of hair, as it fulfils its office, yielding to the now irresistible attraction of that element, and passing, with the disengagement of heat, into various compounds lower and lower in the organic scale, until it reaches at last its starting point, the inorganic Kingdom. This process is called Eremacausis.

When the substance termed Platinum Black, consisting of the metal Platinum in a state of the most mi-

mute division, is brought into contact with a mixture of Hydrogen and Oxygen, an instant combination of the two gases is the result. This phenomenon Chemistry renders somewhat less obscure by revealing the fact that oxygen, above all other gases, possesses the remarkable property of becoming condensed in exceedingly fine interstitial spaces, such as the pores of charcoal, or the interstices between the particles of fluids, and there assuming the liquid form, in which form it most readily combines with any substance which may there be presented to it, for which it has an affinity.

Now in the animal economy we find every molecule of tissue surrounded by an interlacement of vessels of microscopic fineness, separated from them, indeed, by a membrane, but by a membrane of such texture and tenuity as not to offer the slightest impediment to the transudation of parts of the fluid, and to which vessels oxygen is constantly supplied in ample abundance. We discover the oxygen conveyed along these vessels in a vehicle possessed of chemical properties differing in a remarkable manner from those of any other known body, and which

while leaving it utterly incapable of fulfilling any other purpose in the system, fit it for this office with an aptness excelling that of any material which the subtlest ingenuity could devise. The sesquioxyd of iron, when brought into contact with any substance having an active affinity for oxygen, readily yields up half an equivalent of that gas, and passes into the form of protoxyd; in which state, if it meet with Carbonic acid, it seizes upon it with alacrity, and assumes the form of protocarbonate. While, on the other hand, if this protocarbonate be exposed, in solution, to the free contact of oxygen at a slightly different temperature, its carbonic acid is evolved, its lost proportion of oxygen replaced by a new half equivalent, and the black protocarbonate is reconverted into the red sesquioxyd. This might stand unnoticed in Chemistry as an isolated and unimportant fact; but when associated with certain other unconnected facts — the circumstance that iron is constantly found in the blood, and in health in almost unvarying proportion; that it is found in arterial blood in the state of sesquioxyd; that it is blackened in the veins where carbonic acid is known to be formed, and reddened in the lungs where carbonic acid is known to be evolved and oxygen absorbed; that it is almost entirely absent

in vegetables where oxygenation does not go on; that no constituent of the body, save the blood, contains it; that, when hydrosulphuric acid gas, which forms a permanent compound with it, unchangeable by oxygen, is inhaled, in large quantities instant death is the result; whereas by its slow and insidious introduction, as from marsh miasmata, a most marked anæmic state ensues, showing the constant abstraction of globules from the blood; that scarce any waste in its quantity appears, and scarce any separation is necessary; that, when diminished, it is very long in rising again to the normal standard, on which is based the practice of bloodletting in diseases characterised by too rapid oxygenation; and that by diminishing its quantity the process of oxygenation is very remarkably lessened, while by its administration in some form in anæmia, chlorosis, and all diseases in which metamorphosis goes on slowly, the most undeniably beneficial results are effected — a chain of evidence is produced, to the lucid consistency of which no argument could add an iota of conviction —

Not so, however, with the founder of the protein theory, Mr. Mulder: he explains the process of Erema causis by asserting that certain compounds of protein are the oxygen-carriers, and that

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~~the reddening~~ of venous blood in its change into arterial is due to the diminished transparency of the walls of the globules: forgetting the fundamental truth of Chromatics, that a dense substance viewed through an illuminated translucent medium always appears blue; while to produce a red color, it is necessary that the body be of a white, or very light tint, and itself brilliantly lighted. While as to the red matter of the blood, he confesses his utter ignorance of any use which it can subserve, and dismisses it with the cool remark that "it is not," he thinks, "one of the substances which perform a principal part in the organism", and that the sentiments of those by whom "it is generally considered of importance in a chemico-physiological point of view, is an opinion in which he does not concur."

The blood then being the means through which the oxygen for the metamorphoses is conveyed to every part of the organism, by which every islet of tissue is surrounded, and in whose torrent all effete and oxygenised matters are swept away; it follows that in the blood, and, secondarily in those organs which are constantly eliminating and draining off substances from this blood, we must look for the products of these transformations. Yet we find that of all these secerning organs

by far the greater part, as for example the lymphatic and salivary glands and the pancreas, secrete fluids differing in no very great degree from the serum, of a merely albuminous nature, and which again are taken up into the economy — with two remarkable exceptions: the kidneys and the liver. In the substances then eliminated by the kidneys and the liver, we may expect to find the products of Eremacausis.

In examining the secretions of these organs, a most striking difference is at once apparent; those of the one consisting chiefly of hydrogen and carbon, while in those of the other, the prominent element is Nitrogen: a distinction which at once points to the two grand classes of aliments, the nitrogenised and the non-nitrogenised; the one capable of being formed into tissue, the other aplastic; the one intended to replace by new material the continued waste of force, the other to maintain or regulate the temperature of the system. These are termed Elements of Nutrition, and Elements of Respiration.

The chief of the former class are Albumen, Caseïn and Fibrin, with, very probably, Gelatin; and of the latter, Fat, Sugar gum, Starch, glucose and alcohol. A third class might also be added, consisting of those substances which do

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not themselves enter, or but slightly, into the structure of tissues, but which by their presence and chemical reaction effect or assist the changes there taking place. To this division belong the compounds of iron and sodium. These might be denominated Elements of Metamorphosis. We shall endeavor to trace out, succinctly, the transformations which each of these substances undergoes in the human organism.

Fibrin, Albumen and Casein, during the process of digestion, whether carried on in the laboratory or the living stomach, are all dissolved and converted into a substance which, though strongly resembling albumen, differs from it in several particulars, the most remarkable of which is that it no longer coagulates at the boiling point. This property, however, it requires before entering the blood, and here both fibrin and albumen present themselves with their distinguishing peculiarities. Casein is not discoverable in the blood, and is, in all probability, converted into one or both of the other forms. To effect this solution of albuminous bodies, however, the fluid must be acidulated, and this condition is supplied in the gastric juice not only by the lactic acid, which, as we shall notice hereafter, is to be detected in it in

minute quantities, but also by the hydrochloric acid furnished by the decomposition, in the stomach, of the chloride of sodium so amply supplied in the food. This acidity is neutralised in the duodenum by the alkalies of the bile and the pancreatic fluid; and here all further action on those substances must cease, just where the action upon the non-nitrogenised substances commences.

Fibrin, remarkable for its spontaneous coagulability, and its power to form vessels within itself when effused upon living tissue,—a property peculiar to animal fibrin, and possessed by no other known substance — is the plasma, the material from which (with the addition in some cases of minute portions of inorganic substances) all the tissues can be formed; though its most kindred product, the one into which it seems to enter almost without a change, is the Sarcous or Muscular structure.

This tissue, with the exception of the nervous matter, is the only one in which the inherent vital force is employed actively: ligaments, cartilages, bones, tendons, vascular walls, being only of use passively, and by offering resistance; but in this, real, essential force is developed. How the mind, or that act of its which

we call the will, exerts an effect upon the visible, palpable, and unequivocally substantial nerves, is an enigma which will be solved when the connection between Spirit and Matter is explained; nor is the influence of the nerve-conductors upon the muscular fibre much better understood; but this much is known;- that from a greater or less number of the elementary molecules of the muscle, the individual, at will, can cause that second repulsive energy, which, derived originally from the Sun, was employed in the particle in resisting and overpowering the strong attractive power of the External oxygen, to be expended upon some extraneous object in what is called Muscular Contraction. Instantly upon this, the attraction of the oxygen predominates, and the molecule descends into lower combinations with a disengagement of the first repulsive force, the force which primarily elevated it to that state in the vegetable, in the form of Caloric; and this Eremacausis, this gradual but constant combustion of all parts of the organism, is the source of Animal Heat.

It follows as a very evident deduction from our earliest premises, that, until the force which preserves the molecule in its equilibrium against the attraction of oxygen, be

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removed or overpowered, no combination can be effected, and no heat evolved. We have seen that this removal of force is effected, and most rapidly, by muscular exertion; consequently we should expect to find that when all such muscular action, including the constant involuntary contraction termed tonicity, were stopped, the evolution of heat must also cease. Now it has been long noticed that when the medulla oblongata of an animal was divided or crushed, although the processes of respiration and circulation were kept up artificially, the animal cooled very nearly, or quite as quickly as another the body of which was left untouched. From this phenomenon some philosophers drew the sapient conclusion that the nerves were the source of Animal Heat; but, as Liebig observes, "if this view exclude chemical action, or changes in the arrangement of the elementary particles, as a condition of nervous agency, it means nothing else than to derive the presence of motion, the manifestation of a force from nothing. But no force, no power can come of nothing."

In the animal just mentioned we have two of the conditions of Eremacausis — particles of organised matter, and a supply of oxygen — but the third condition, the removal of the resisting

and maintaining power does not occur, and the particle can not yield. I have spoken of muscular structure, as in this the phænomena are most striking, but the same truth applies to all the other tissues, each molecule of which has its peculiar office and duty, and until its purpose is achieved it remains utterly impassive to the attraction of the oxygen, and perfectly indestructible

Were they at all worthy of notice, a word might here be said of the absurd and contemptible arguments and objections of those who with might and main withstand and cry out against the gradually dawning of reason upon Heaven knows long enough demented Physiology, saying that "these views are too chemical", that "the human body is not a mere laboratory." and that "vital processes and vital laws must be taken into account", &c. &c.; and one individual, God help him, in a long article in the "Lancet" relates how a friend of his, having been reading Liebig's works, went mad, poor man, and fancies that his chamber was filled with fiends and goblins, who were carrying on with the most approved chemical apparatus, the various processes in his body; from which affecting incident the writer takes

occasion to descant most eloquently on the baneful effects of the new theories, and at last in the flow and inspiration of his subject, rises into absolute scurrility against Liebig, his pupils and admirers, and physiological chemistry and chemists in general.

Too Chemical forsooth! What then is Chemistry save an investigation of the laws which govern the particles of Matter? Because the matter happens to be in the shape of a man or a beast, need we therefore take for granted that it is a contradiction to all the known laws which govern the material world; and fabricate for it a host of imaginary rules in themselves absurd and essentially false? True, there are principles in Vital chemistry not yet discovered; true, the experimenter cannot employ in his laboratory all the combinations of forces which take places within the human body; true, there are very many points in this yet infant study that are obscure or apparently contradictory; but faithful, earnest inquirers will still go on, adding discovery to discovery, and linking truth to truth, while those, too wise to care about understanding, wrapt over eyes and ears in the swing mantle of their self-applause, dole out to their hearers idiot words,

and trite precepts and explanations, which are as guiltless of all meaning, as master and disciple are of comprehending them.

But here the particle descends,— so far all is tolerably clear, as regards phenomena at least, but now commences a succession of intricate changes and chemical reactions, which in the present imperfect state of physiological chemistry it is impossible exactly to define, and difficult closely to investigate; but the uses and advantages of which, are, perhaps, to prolong, and render more equable, the extrication of caloric.

The Nutrient stage, or the forms in which the particles are carried to be deposited in place of the wasted tissue, has been already glanced at in the shapes of fibrin, albumen, and casein; and now commences the Transition Stage, being forms of lower organic grade than the tissue, found in the fluids bathing it, but not in the excretions, or in most minute traces at farthest: to which class belong Kreatin, Kreatinin, Sarcosin, with Lactic and Inosinic Acids.

And lastly comes the Excretory stage, in which the particles are eliminated from the body by the kidneys, skin and

lungs, principally under the forms of Uric Acid, urea, Ammonia, water and Carbonic Acid.

Of the first substance of the Transition stage, Kreatin, as indeed of all the members of this group, but little is known. It is a neutral, crystallisable substance, of the formula $C_8N_3H_{11}O_6$, which can be obtained by a process pointed out by Chevreul, and improved by Liebig, from the expressed juice of muscle. It seems to bear a direct ratio to the vigor of the muscle and the rapidity of destruction; thus in the flesh of the heart its proportion is very large; and in foxes which had been hunted to death Liebig found it in quantity ten times greater than in those which had been well fed, and kept in confinement. It is closely allied to Urea, to the quantity of which it stands in direct proportion, and if boiled with baryta, that substance may be separated, and crystallised with Nitric Acid as a nitrate of Urea. It is not improbable that it is one of the earliest results of muscular decomposition.

Of Kreatinin, another substance of this class, even less is known than of the former. Its formula may be expressed by deducting 4 equivalents of water from the formula of Kreatin:—

1 eq. Kreatin $C_8N_3H_{11}O_6 - H_4O_4 = C_8N_3H_7O_2$ = 1 eq. Kreatinin.

If to the elements of Thein or Caffein we add those of amidogen we have the same result: 1 eq. Thein $C_8N_2H_5O_2 + NH_2 = C_8N_3H_7O_2$ = 1 eq. Kreatinin. Both it and the previous compound, Garrod states, have been found in healthy urine, but it is to be doubted whether in these cases the functions of the skin were carried on to perfection; especially when it is recollected how greatly modern clothing impedes the free access of oxygen to that surface.

About Sarcosin, the next in order, a crystallizible substance somewhat similar to Kreatin, perhaps the only circumstance worth remarking is that when deducted from Kreatin it leaves the formula of Urea:- $C_8N_3H_{11}O_6$ 1 eq. Kreatin $- C_6N_1H_7O_4$ = 1 eq Sarcosin, $= C_2N_2H_4O_2$ 1 eq. Urea.

Inosinic acid, another imperfectly known compound, bears the formula $C_{10}N_2H_7O_{11}$. It is strongly acid, and contributes toward giving the marked acidity to the fluids found in the muscular structures. It forms salts with lime, baryta &c., and is supposed by some to impart to the juice of flesh its peculiar taste.

Lactic acid, the last of these obscurities is a clear, colorless liquid, highly soluble in water and alcohol, and of an intensely acid taste. Its formula is $C_6H_5O_5 + HO$

It is found occasionally in the gastric juice of man, but not in that of the carnivora; whence it is not improbable that it is formed in that fluid solely by the saccharine and amylaceous constituents of the food. Here it may subserve the important purpose of combining with the lime of the ingesta and presenting it in a highly soluble form to the blood; an action however which can only take place when hydrochloric acid is absent from that fluid, as this agent readily decomposes the lactates of lime.

In the sweat also, though it has not been clearly demonstrated, it is probable that it may exist, as that fluid exhibits an acid reaction, notwithstanding the constant presence of ammonia. It is the only compound, formed from the destruction of nitrogenised tissues, that contains no nitrogen; and some, from this reason, deny its existence in the healthy animal fluids.

On the other hand, those who maintain its formation from transformed muscular structure, and insist on its constant presence in the gastric juice, erect on these two questionable assertions a theory rather ingenious than plausible. The gastric fluid, say they, derives its lactic acid in part, if not entirely, like its proper mucous constituents, by a general

secretion from the capillaries which so closely ramify upon the internal coat of the stomach. To these, as to the entire venous system, it has been supplied by the disintegration of tissues, especially the muscular; hence when this disintegration is unusually rapid, as in vigorous exercise, the amount of lactic acid produced and poured into the stomach, is proportionately great, and this acting as a slight irritant upon that organ, (or perhaps, as in thirst, the blood itself in some manner communicates a consciousness of its altered qualities) it thus occasions the sensation of hunger. It might be objected to this, that in many wasting fevers the amount of lactic acid formed must equal and even greatly exceed that produced by exertion; and yet in these diseases the appetite for food is almost entirely destroyed.

It will be observed that the formula of hydrated Lactic Acid is isomeric with that of Grape sugar = 2 eq. Lactic Acid. $C_6H_6O_6 = \underset{12}{C}\underset{12}{H}\underset{12}{O}$ 1 eq. Glucose — and it may readily be produced from that substance. Thus the mere contact of a protein compound in a state of decomposition is sufficient to bring about this effect; as, in milk, the commencing putrefaction of the casein, causes the rapid conversion of its sugar into Lactic acid. So

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also in the stomach, the constantly disintegrating mucous membrane of that organ, at a certain point of change, will cause this conversion of the sugar very readily, while at another it transforms it into mannite and mucilage, or into alcohol and carbonic acid, or into acetic acid and water; the protein compounds in their decomposition appearing to descend by regular steps, corresponding to the gradations through which saccharine matters pass in the process of acetification.

Again another use of lactic acid in the stomach, is based upon Rochleder's views in regard to the composition of caseïn. He considers that this substance, when pure, is nearly insoluble in water; and that the soluble caseïn owes this property to the presence of combined potash, soda or lime. Hence the coagulation of caseïn by acids is neither more nor less than a combination of the acid with the base of the compound, and the separation of pure, insoluble caseïn. This accounts for the rapid coagulation of milk upon its becoming sour, and the especial rapidity with which this change takes place in warm weather, as only minute portions of lactic acid need be formed to neutralise the traces of soda which in milk preserve in solution a very

large quantity of casein. If this view be correct, and it bears many marks of probability, casein would appear to differ from albumen in nothing but its non-coagulability at the boiling point; and it seems identical with that peculiar form of albumen which appears in the chyle when first formed, and into which the three protein-compounds of the food are ~~cancerted~~ converted, previous to their ultimate resolution into fibrin.

These, then, are the principal substances, as far as yet discovered, of the Transition stage. They are not taken in with the food, ~~and~~ they are not found (excepting traces of lactic acid) in any of the excretions, and they must necessarily have been formed within the body by the action of oxygen on the tissues, and by the metamorphoses which their elements undergo among themselves. What these changes are, and in what order they occur, is not yet known. It is true we may see by our formulæ that from these substances, by the addition of oxygen, or of oxygen and water, the various excretions may be formed; as e.g.

1 at. Kreatin	$C_8 N_3 H_{11} O_6$		$C_{10} N_4 H_4 O_6$ – 1 eq. Uric Acid
1 at. Kreatinin	$C_8 N_3 H_7 O_2$	=	$C_4 N_4 H_4 O_4$ – 2 eq. Urea
1 at. Inosin. a.	$C_{10} N_2 H_7 O_4$		$C_{12} O_{24}$ – 12 eq. Carbonic Acid.
28 at. Oxygen	O_{28}		$H_{13} O_{13}$ – 13 eq. Water.

but without some clear proof, or corroborative phenomena, they explain nothing, and we are left as much in the dark as before.

The last stage of transformation which these substances undergo, is that in which they are eliminated from the system by the kidneys, skin and lungs, in the forms principally of Uric Acid, Hippuric Acid, Urea, Phosphates of Soda, lime and magnesia, Ammonia, water, and carbonic acid. These we shall consider in turn.

Uric Acid. This, though constituting but a small proportion of the solids found in the renal excretion, — fluctuating above, and sometimes below one part by weight in the hundred — becomes, in the eye of the pathologist, of greater importance than any other, from its so frequently forming the material of urinary calculi. It presents a pearly white appearance, and an acid reaction; and is but sparingly soluble in cold water, requiring to dissolve it completely, about ten thousand times its weight of that fluid.

It would, very probably, never be an ingredient of the urine, if the individual were in perfect health, and a couple

Liebig, p. 130

Frick's analys

muscular exercise were taken, full oxygenation allowed, and the entire surface of the skin freely accessible to the freshness of the external air. It is formed in the periphery in much greater proportion than it presents in the urine, but is rapidly converted by oxydation into urea.

$$\left.\begin{array}{ll} \text{Formula of blood} & C_{48}N_6H_{29}O_{14} \\ \text{1 eq. water} & HO \\ \text{1 eq. oxygen} & O \\ \hline & C_{48}N_6H_{40}O_{17} \end{array}\right\} = \left\{\begin{array}{ll} C_{38}NHO_{32}11 & \text{- } \tfrac{1}{2}\text{ eq. Cholic Acid} \\ C_{10}N_4H_4O_6 & \text{- 1 eq. Uric Acid} \\ NH_3 & \text{- 1 eq. Ammonia} \\ \hline C_{48}N_6H_{40}O_{17} & \end{array}\right.$$

$$\left.\begin{array}{ll} \text{1 eq. Uric Acid} & C_{10}N_4H_4O_6 \\ \text{4 eq. water} & H_4O_4 \\ \text{6 eq. Oxygen} & O_6 \\ \hline & C_{10}N_4H_8O_{16} \end{array}\right\} = \left\{\begin{array}{ll} C_4N_4H_8O_4 & \text{2 eq. Urea} \\ C_6O_{12} & \text{6 eq. Carbonic Acid} \\ \hline C_{10}N_4H_8O_{16} & \end{array}\right.$$

By the addition of less Oxygen Uric Acid is converted into Urea and Oxalic Acid:

$$\left.\begin{array}{ll} \text{1 eq. Uric Acid} & C_{10}N_4H_4O_6 \\ \text{7 eq. water} & H_7O_7 \\ \text{8 eq. Oxygen} & O_8 \\ \hline & C_{10}N_4H_{11}O_{16} \end{array}\right\} = \left\{\begin{array}{ll} C_4N_4H_8O_4 & \text{- 2 eq. Urea} \\ C_6H_3O_{12} & \text{2 eq. hyd. Ox. Ac.} \\ \hline C_{10}N_4H_{11}O_{16} & \end{array}\right.$$

Thus when individuals suffering from uric acid calculus are sent to the country for their health, the appearance of oxalate of lime in their urine, is frequently the earliest indication of improvement; and conversely, when persons in robust health are suddenly deprived of their accustomed exercise and fresh air by confinement in prisons or work houses, nothing is more common than an instantaneous apparition of oxalate of lime.

In the carnivora, which are constantly employing in-

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mense Muscular force, such as tigers and lions, in which decomposition and oxygenation are going on with greatest rapidity, and which inhale the amplest supplies of oxygen, Uric Acid is entirely replaced by Urea: but in serpents and other inert, slowly respiring animals, it constitutes, in the form of urate of ammonia, nearly the whole of the excrements.

In persons who have been living highly and plentifully, and at the same time by sedentary habits and the use of alcoholic drinks diminishing the oxygenation of the tissues, it frequently attains so great an excess as not only to be discoverable in the blood and sweat, but to be deposited in chalky masses of Urate of Soda under tendons and in the joints. When an undue proportion of sabilances which combine more readily with oxygen than the elements of the tissues, such as fats and wines, is taken into the system with the aliments, the amount of Uric acid is at once greatly increased; and the same thing is observable in piscivorous birds whose diet contains such quantities of oil, and whose thick, mortar-like excretions consist almost entirely of urate of ammonia.

Hippuric acid, ($C_{18}N_2H_{9}O_{6}$) according to Liebig's analyses, is an invariable constituent of the urine in health, and holds about

the same proportion as uric acid. Like that substance, it takes its base from the alkaline phosphates, and like it, too, it acquires a greater degree of solubility by this combination. It is the most highly carbonised of any of the excretions, and may possibly be occasionally increased when the liver fails to perform thoroughly its function of eliminating the hydrocarbons.

Its formation, in the body, from benzoic acid, is a curious and important fact, if fact it be, but one scarcely belonging to the subjects of the present brief essay.

Urea. $C_2 N_2 H_4 O_2$ This, the principal constituent of the urine, amounting, according to Berzelius and Lehmann, to nearly one half its entire solids, and the most highly nitrogenised product of Animal Excrementis, is, as we have just said, the result of the oxydation of uric acid. Liebig indeed considers it to exist in the latter substance ready formed, together with a hypothetical body, Uril; and gives the following formulae:

1 eq. Uric Acid $C_{10} N_4 H_4 O_6 - 2\,\overline{U}l\ 2(C_4 N O_2) = C_2 N_2 H_4 O_2$ = 1 eq. Urea.

When oxalate of lime, in its well known forms, is detected in the urine, by the microscope, there are frequently seen with it considerable numbers of crystals of a peculiar conformation

Simon.

known as "the dumb-bell variety", which for no other reason but that they are usually found with that salt, are supposed to be oxalate of lime also. They are evidently a product of the changes of the urinary elements, and particularly, or entirely (as Dr Chas. Frick's recent experiments have shown) a transformation of Uric acid, as we have seen oxalic acid to be, and occurring simultaneously with its defective oxygenation and separation of Urea; and whether they may not be some modification of this radical Uril, or of its compounds, were well worthy closer investigation.

Urea bears a direct proportion to the rapidity of waste. In fevers, where oxydation is going on with greatest intensity, during severe and exhausting muscular exertion, in excessive cold, where the muscular tissues are consumed in maintaining the temperature of the body, - in all these it is notably increased: while in anæmia and chlorosis, after severe hæmorrhages, and in cases of prolonged intermittents or of typhus fever, - in short, wherever oxydation is lessened, the urea proportionately diminishes. This, as well as Uric Acid, is found in minute quantities in healthy blood, but it at once becomes abundant in that fluid upon ligation of the ureters, or ex-

cision of the kidneys; convincing testimony, if any were needed, that these products are not formed by those glands, but merely secreted, or separated from the blood.

Ammonia, NH_3, the most highly azotised animal excretion next to urea, is found in the urine, if found at all, only in the faintest traces, which indeed are most probably owing to the commencing decomposition of that fluid in the bladder or even in the cavities of the kidneys, as it is well known how readily this change takes place in retention of urine, which indeed it is almost impossible to keep for any length of time without its urea changing into Carbonic Acid and ammonia. This reaction may be exhibited thus:-

$$\left.\begin{array}{ll} \text{1 eq. Urea} & C_2 N_2 H_4 O_2 \\ \text{2 eq. Water} & H_2 O_2 \\ \hline & C_2 N_2 H_6 O_4 \end{array}\right\} = \left\{\begin{array}{ll} C_2 \quad O_4 & \text{2 eq. Carbonic Ac.} \\ N_2 H_6 & \text{2. eq. Ammonia.} \\ \hline C_2 N_2 H_6 O_4 & \end{array}\right.$$

It is frequently found in the blood, and in large proportions in what are commonly known as putrid fevers; but whether it arise here from the decomposition of the urea, while yet in the circulation, a not, and whether it be a proximate cause of the disease or of any of its symptoms, or rather an effect, it is the province of the pathologist to determine.

It is eliminated chiefly by the skin, in the form of lactate

of Ammonia, with the phosphate, and sometimes the acetate. It has not been detected in the sweat of the herbivora, but it is to be recollected that in them it forms a normal constituent of the urine.

Water, the only constituent of the tissues which contains no nitrogen, is produced in almost every phase of metamorphosis which protein compounds undergo; and is more rapidly evolved from the system, in various forms than any other of its numerous excrementa. It composes on an average ninety per cent. of the entire weight of the body. From this large production of water, the objection against the theory of Animal Heat has been drawn that the combustion of so much Oxygen and Hydrogen in a given time as would enter into the composition of the water formed in the periphery in the same time, would liberate a far greater amount of Caloric than is produced in the body, to say nothing of the combustion of the Carbon and Nitrogen: but it must be borne in mind that if those gases combine with the evolution of a certain degree of heat, they have just before been liberated from a preceding combination, with the absorption of a corresponding quantity; but that, (as in the combustion of solid bodies,

such as oils, woody fibre &c,) the general change of the entire compound is to one of greater density, and that the difference of density between this (or the sum of all the compound viewed as one,) and the previous state, gives the nett amount of caloric actually set free and available.

The uses of water in the economy are many and obvious: it gives the liquid form to the fluids, it is partially or altogether the solvent of the substances introduced as aliment; it regulates the temperature by its evaporation; it gives the tendons, ligaments &c. their elasticity and flexibility, and the membranes their pliability and softness; and is an important chemical agent in all the changes which take place in the organism. It is eliminated in the liquid form by the kidneys, and by the lungs and cutaneous exhalents in that of aqueous vapor.

And finally, Carbonic Acid. It will be readily seen by comparing the formula of protein, (or the empirical expression of fibrin and albumen,) $C_{80}N_{6}H_{36}O_{14}$, that it contains a far greater proportion of Carbon and Hydrogen than either Urea or Uric Acid, the ultimate products of its transformations. During the production of those bodies, therefore, these elements must be set free, or enter

into new combinations. How the oxygen for these combinations is supplied, we have already shown, as well as the final elimination of the Hydrogen in the form of water; and in like manner the Carbon thus released from its previous affinities takes to itself two equivalents of Oxygen, and is converted into Carbonic Acid. Some portion of this is unquestionably dissolved in the serum of the blood, and indeed it may be allowed to escape in free bubbles from that fluid by the removal of atmospheric pressure; but by far the greater part combines, as before stated, with the iron of the globules, and in the capillaries of the lungs, where these globules are exposed to the contact of oxygen, it is liberated constantly in its gaseous form. It is produced, again, by the descent of some of the Transition Compounds into the shapes in which they are excreted; and how Uric Acid gives it off upon its conversion into Urea, has been shown already. And, as in vegetables, the most remarkable of their vital actions is a constant separation of the elements of this gas, and the employment of the carbon in the production of compounds of a higher scale; so in man, in whom the movements of the vegetative life are reversed, the re-formation of Carbonic Acid accompanies all the processes of Animal Eremacausis.

But this will be farther noticed when speaking of the Elements of Respiration.

In addition to these subsiances, the blood is found rich in certain salts which it obtains for the most part from the vegetable Kingdom, and which either enter into the composition of certain tissues, or affect the changes which those tissues undergo previous to their excretion; while according to some, they subserve another important purpose: that of preserving the globules in their disc-oid form; but the value of this hypothesis rests upon the assumption that because the corpuscules are found in that peculiar shape, that shape is absolutely essential and indispensable, whereas what their peculiar configuration has to do with their chemical actions, or why they might not circulate oxygen just as well if they were round or flat, I never could discover. But these gentlemen's hypothesis rests on another false assumption – that the form of the globules would be changed by changing the density of the surrounding fluid, while the fact is, that though they might temporarily be swelled out by a denser, or emptied by a rarer medium, (just as in a tube of glass filled with hydrogen and closed above by a porous diaphragm, when its lower end is immersed in water by the rapid escape of the Hydrogen a temporary vacuum is formed and the water rises for

Liebig.

a few moments;) yet as soon as an interchange of the fluids had been effected, and an equilibrium of density established within and without the capsule, all tension must be taken off, and the globule must return to its original shape and natural fulness.

These salts are the phosphates of lime, magnesia and soda, sulphate of potash, chlorides of sodium and potassium, fluoride of calcium, and silica.

The phosphates form the principal inorganic constituents of healthy bone, and their existence in the blood may be explained not only from their direct presence in vegetable substance, but from the reaction of the phosphorus of the protein compounds, which is changed by oxygenation into Phosphoric acid, upon the lime which occurs in so considerable quantity as well in the food, as in the form of sulphate and carbonate in all spring and river water. A peculiar property of the phosphate of soda, $PO_5, 2(NaO)HO$ is that it absorbs twice as much Carbonic acid as Carbonate of soda, and gives off the whole again very readily. Hence it has been thought to play an important part in the function of Respiration. When the earthy phosphates act on salts of potash they produce an acid salt, the tribasic phosphate of potash with one equivalent of fixed base, $PO_5, KO, 2HO$; and when the same earthy phosphates and

phosphate of potash act on soda salts, an alkaline salt is produced: the phosphate of soda with two eq. of fixed base – PO_5, 2 NaO, HO.

On the peculiar properties of these compounds Enderlin founds his denial of the presence of carbonates in the blood; and he accounts for their occurrence in the analyses of other chemists from the fact that when the tribasic phosphate of soda with three eq. of fixed base ($3NaO\,PO_5$) is exposed to the atmosphere, it becomes converted into 2 NaO, HO, PO_5 and $NaOCO_2$, Carbonate of Soda. As soon as any portions of ammonia are found in the urine, which, as we have observed, very readily takes place, they are taken up by one or other of these bi- and tri-basic salts, and we have a phosphate of soda and ammonia, a phosphate of ammonia and magnesia, or, if available uric acid be present, a urate of ammonia. But there is yet another important office fulfilled by these salts as Liebig has shown. Free uric acid is only soluble in about ten thousand times its weight of water; but if phosphate of soda be present, this refractory substance is very readily dissolved and the alkaline phosphate assumes an acid reaction, which, by the way, accounts for this property in healthy urine. At the common temperature phosphoric acid decomposes urate of soda, while at a higher temperature

uric acid decomposes phosphate of Soda. Thus these salts, although possessing none of the injurious properties of pure alkalies, and none of their causticity, play the part of alkalies to the acids produced in Excremacausis; and by these nicely poised affinities, and these mutual reactions and distributions between acids and bases, however incidental causes may contribute to a preponderance of one or the other, the general qualities of the excreted fluids remain the same. I am well aware that in this brief notice I have scarcely given the phantom of an outline of Liebig's beautiful and ingenious hypotheses; but I am equally well aware of the presumption that it would evince to attempt to discuss them more fully.

The sulphates of potash, soda and magnesia form also a considerable portion of the salts of healthy urine, amounting indeed, according to Bergelius and Lehmann, to double the quantity of all the soluble phosphates. Now part of these may be received in the form of salts in the aliments, but in very trifling amount. Wheat and the other cerealia contain scarcely more than traces of soluble sulphates, and animal flesh none at all. They are in great part formed, unquestionally, from the oxydation of the free sulphur in the protein compounds, which are converted first

sulphides, and finally, as Wöhler's experiments have shown, into sulphates, taking their alkaline bases from the alkaline phosphates, which thus become acid salts.

The water of springs and rivers, as is familiarly known, contains a large proportion of sulphates, especially of the sulphate of lime; an amount certainly worthy of being taken into consideration, though I think these gentlemen have omitted to notice it in their calculations.

Chloride of Sodium will be noticed when viewing the changes of the Respiratory Elements.

The fluoride of Calcium, and Silica are found in the most minute proportions of any salt in the body, and are chiefly distinguishible in the enamel of the teeth. It has been observed, but I declare I forget by whom, that the teeth of skeletons found at Herculaneum and in antique tombs, were far less frequently defective than they are observed at present, and their bones, considering the length of time that they have remained under ground, surprisingly well preserved; and on analysis it was ascertained that they yielded a much greater proportion of these elements than do modern teeth or bones. A chemist, noticing this fact, has recently suggested that it may be partially, or

Mulder, p. 324; et al.

altogether explained by reference to the comparatively modern custom of closely bolting flour, by which means a far more complete separation is effected of the Bran, in which these substances almost entirely reside. However, this is somewhat foreign to our subject.

Gelatin, Isolatin, Chondrin and Glutin, (all, according to Mulder, modifications of one substance, are, as far as has yet been shown, exclusively animal products. In the herbivora, therefore, they must be formed from the protein compounds, though they contain more Carbon Hydrogen and Nitrogen than protein, and yield no trace of that body when acted upon by alkalies or tested by hydrochloric Acid. Some physiologists hold that fibrin may be formed from gelatin by the separation of some of its elements and the addition of oxygen; but while this assertion is altogether devoid not only of proof, but even of plausibility, the most decisive experiments have shown that such is not the case. Animals fed on gelatin alone, invariably waste away, and at length die with all the symptoms of starvation. Convalescents who are kept on a diet consisting almost exclusively of gelatin, remain emaciated as long as this regimen is continued, while they rapidly gain in blood and flesh as soon as once more

nutritious aliment is allowed. And even were proof wanting in this question, it would appear unreasonable, and contrary to all the established principles of physiological chemistry, to suppose that, in the animal organism, from so passive a substance as gelatine, tissues should be produced possessing the peculiar powers of muscle; or that blood and flesh should be formed by a process of destructive decomposition.

These objections, however, do not obtain against the hypothesis that these substances may be dissolved in the process of digestion, and enter again in the system into the formation of gelatinous tissues: on the contrary, all experiments tend to prove that ~~they~~, in the carnivora this is their true destination and office. The gelatin of the bones devoured by a dog is entirely digested, and nothing but the bone earth is found in the fæces. No trace of them is discoverable in any of the excretions, and hence they must have been applied to the subservience of some purpose in the economy, and must be separated in some other than their original form. And if the dissolved fibrin of the food can be applied directly to the replacement of the wasted tissues composed of that substance, it is a conclusion of perfect analogy to suppose that the dissolved gelatin should at once be

employed to restore the disintegrated cartilages, areolar structure, tendons, membranes and vascular walls.

The undeniable fact that convalescents may recover on a gelatinous, but not strictly gelatinous diet, offers no invalidation, but rather confirmation of this theory. For if we admit that on a diet of pure protein-compounds the gelatinous tissues must be formed from the elements of blood, it is obvious that if the constituents of these tissues be supplied at once ready formed, the blood will be so far saved from that expenditure, and allowed to apply itself to the production of muscular fibre, and the accomplishment of its other vital purposes.

Elements of Respiration. For the support of animal life, and the proper performance of animal functions, a certain elevation of temperature is necessary. The human body, as careful experiments have proved, at the Equator or the Pole, preserves internally almost precisely the same degree of heat. Even in the violent extremes of disease the variation from the normal standard is comparatively trifling. Now why this should be so, is a difficult problem to solve; far more difficult

than to explain how it is so. It is true we can set wide limits, and say that at such a temperature the fluids would be vaporized, and at such a temperature congealed; or narrowing the boundaries, show that at a few degrees lower certain salts cannot be dissolved, and at a few degrees higher certain solids must be decomposed; but contract these lines as closely as we may, the range of temperature in which life can persist is narrower still. Yet while admitting that this remarkable fact is one of the questions which Physiology has yet to answer, we may delight ourselves with the lucid explanations which she has given to other parts of the theory.

We have seen that in the descent of the tissues heat is constantly evolved by the combination of their elements with oxygen. Now this heat may be given out with sufficient rapidity to preserve the constant temperature of the body, but in order to effect this the decomposition and of course the exertions on which that decomposition depends must be proportionately rapid.

In the carnivorous animal these conditions obtain, to a certain degree, as in the hunter savage, and they are obliged to use an immense amount of muscular exercise to liberate the requisite degree of caloric, or, in other words to furnish material for respiration. But

the conditions of man's existence are such as render him incapable of going through the constant and violent exertions and displays of energy which make up the life of the lion or the tiger; and Nature has provided in his food substances which while in so perfect and passive an equilibrium as to combine readily and spontaneously with oxygen, furnish a far greater degree of heat than the tissues of the body.

Of all organisable substances hydrogen by oxydation gives out the greatest amount of caloric, and next to this carbon; nitrogen stands lowest in the scale: hence, of all alimentary substances those which contain the most hydrogen or hydrogen and carbon, are best adapted to the support of Animal heat. Substances of this sort are Sugar, Glucose, Gum, Starch, alcohol and fat; and these compounds form the Elements of Respiration.

According to Liebig's calculations, which it would be superfluous here to detail, in order to keep the body at the same temperature during equal times, there are required of Cane Sugar 100 parts; Glucose 106; Starch 97.2, alcohol 53.8; Fat, 40.2; and of Flesh 309.7. "Pure flesh therefore becomes the least, and Fat the greatest values

an Element of Respiration."

Fat, $C_{10}H_{11}O$. The amount of Fat in the system bears with the other tissues a direct proportion to the rapidity of oxygenation, and consequently to Respiration. We have seen that by violent exercise of function the muscular tissue is more rapidly consumed, and in like manner the fat disappears; the animal substances sharing the oxygen between them as remoter causes incline them. Thus want of exercise promotes the deposition of fat; and in the infant, in which two states are requisite, the higher temperature than in the adult, and deposition of tissue constantly exceeding the consumption; these conditions are fulfilled by the butter and sugar contained in the milk of the mother: for while they take the place of the other animal products as Respiratory Elements, in this process, as we have seen, they supply of all other substances the greatest degree of heat. In the adult, on the contrary, who neither loses nor gains, the carbon, hydrogen, nitrogen and oxygen given off from day to day are exactly equal to the Carbon, hydrogen, nitrogen and oxygen consumed.

Hybernating animals, who are about commencing their

winter's sleep are always found remarkably plump and fat, but in the spring when they leave their dens they are singularly lean and wasted; and during the whole of this period their temperature although lower than when they are in a state of activity, is yet far above that of the surrounding air. Now scarcely any amount of muscular or other tissue has been consumed in this time passed in a state of torpidity; the principal, and almost only substance, therefore, which has combined with the inspired oxygen must have been the fat.

While the inhabitants of tropical countries rely for subsistence chiefly upon the succulent vegetables and fruits which their climates so luxuriantly produce, the natives of Arctic regions, as is well known, devour immense quantities of oils and fatty substances, and perish unless they are supplied.

In the carnivora, whose life is continual fierce exertion, the amount of fat taken in as food is small, far less than that of muscle and blood; while in the inert herbivora the diet consists mainly of mucilaceous and saccharine matters, — which, as we shall see, are readily convertible into fat; — and as a general rule, the consumption of adipose substances is in an

inverse ratio to the rapidity with which the tissues are destroyed.

It were superfluous here to multiply facts and illustrations on a subject already so clearly proved and so familiar; enough has already been said to show that the purpose which fat subserves in the body is to assist in maintaining the Animal Heat.

When this substance is taken into the stomach, and while it remains in that organ, it continues, for the most part, or entirely unchanged, as the gastric juice is strongly acid, and in an acid fluid it is insoluble. But no sooner does it reach the duodenum where it meets the alkaline secretion of the pancreas, the soda which had been previously formed from the salt, and the bile, which as we shall see, is an alkaline soap, then it passes into the form of an emulsion, the admixture becoming more and more perfect until it is poured with the chyle into the venous blood. In the blood it is discernible by the microscope in the form of small drops or globules, which, according to Ascherson's experiments are enclosed in a capsule of albumen. But that gentleman goes farther, and says that these are the primitive productive mole-

cules or cells. Now apart from the utter unreasonableness of a proposition like this, that an albuminous capsule should by filling itself with fat become a living, growing, self reproducing cell; capable of becoming here a part of muscle, there a bile cell, and here again a particle of brain — apart from all this, how different are these oil-drops, varying in every conceivable degree in size, now larger, now smaller than the corpuscles, from the uniform proportions of the cell. Are the life-endowed cells by whose quiet working the human organism is constantly built up and shaped out like a coral reef by its earnest architects, mere sacs of a substance itself a product of decomposition? Experiments like these, as Mr. Mulder observes, give us no more insight into the true vital cell process than does the formation of bubbles from a solution of soap.

Before proceeding farther with these complicated transformations of fat, it may be well here to notice Liebig's beautiful and consistent views in regard to its production originally, and its formation from other hydrocarbons.

We must admit, from the proofs which Organic Chemistry furnishes, that all the non-nitrogenized vegetable

principles are derived from Carbonic Acid and the elements of Water, and that their composition is accompanied with the liberation of Oxygen. Now we may consider Carbonic Acid as composed of a Radical, Carbonic Oxyd, and one equivalent of Oxygen $CO + O = CO_2$: and substituting R for the Radical, we have Carbonic Acid = R + O. Thus when this Carbonic Acid is decomposed in the plants, it may lose one fourth of its Oxygen, and become a sesquioxyd of the radical;- $2\,CO_2 - O = C_2O_3 = 2\,R + O$ = oxalic acid. In this way the modifications of these substances present a perfect analogy to nitric or any other multiform acid.

But now let us assume that an equivalent or more of the oxygen has been replaced by Hydrogen upon its separation; at once new compounds are produced according to the amount of oxygen separated, and according as it is the oxygen of the Radical, or the oxygen exterior to the Radical which has been removed. Thus $CO + O$ = carbonic acid, or $R + O$; and CH being the radical of the hydrocarbons, we may have $CH + O = R + O$; or $CH + H = R + H$, carburetted hydrogen gas.

Thus if we add to the body whose formula is $C_4H_2O_2$, and which may be derived by the separation of 2 equivalents

of oxygen from Malic, or 3 O from Tartaric acid, 1, $1\frac{1}{3}$, $1\frac{2}{3}$, or 2 eq. of water, we obtain the composition of Lignin $C_{12}H_9O_9$, Starch $C_{12}H_{10}O_{10}$, Gum $C_{12}H_{11}O_{11}$, and of Glucose $C_{12}H_{12}H_{12}$. And these transformations do certainly occur in the vegetable, and in all is oxygen separated, and water assimilated.

For the fatty substances the radical C H is assumed, and thus Butyric Acid $C_8H_8O_4$, becomes 8 R + 4 O; Margaric Acid 34 R + 4 O; and Stearic Acid 68 R + 7 O.

As Carbonic Acid in the vegetable yields up one half its radical oxygen to be replaced by Hydrogen, and thus $C_{12}\left.\begin{matrix}O_{12}\\O_{12}\end{matrix}\right\}$ = Carbonic Acid, becomes $C_{12}\left.\begin{matrix}O_{12}\\H_{12}\end{matrix}\right\}$ Grape Sugar; so in the animal Grape sugar may resume its lost Oxygen, and return to Carbonic Acid and water. And this very process occurs in the laboratory in the transformations of a saccharine product - Alcohol.

As the metamorphosis of the particles in the animal economy is not governed by those complicated laws which have regulated their ascent in the organic scale, (and which we have endeavored to describe as characterised by an appropriation of Repulsive force,) but a simple and graduated descent, at every step approaching nearer the Inorganic

Endeli

kingdom, it might be thought that these transformations to substances of lower grade might be accomplished out of the body; and in one case at least, the change of Glucose into Butyric acid, this has been actually effected; the chemical modification consisting only in the addition of oxygen, and the separation of water and carbonic acid:

$$\text{Glucose} = C_{12} \left.\begin{matrix} H_{12} \\ O_{12} \end{matrix}\right\} + 4O = \begin{matrix} C_8 H_8 O_4 & \text{Butyric acid} \\ H_4 O_4 & \text{water} \\ C_4 O_8 & \text{carbonic acid.} \end{matrix}$$

As all the crystallisable fatty acids have the same type, we may conclude their modes of production to be analogous, if not identical.

Fat. $C_{11} H_{10} O$. Human fat exists principally in the forms of stearates and margarates of glycerin, variously united. They are soluble in albuminous fluids, such as the serum of the blood, and in this state they exist in the yolk of the egg. In the periphery they meet with oxygen under the favorable circumstances mentioned before, and are probably converted, in part, into water and carbonic acid, but chiefly into bile.

This fluid, the bile, as secreted by the liver, exhibits an alkaline reaction, and consists of soda, derived from the chloride of sodium which is decomposed in the stomach, but how we know not,

and while its chlorine becoming hydrochloric acid imparts the necessary acidity to the gastric juice, the soda is taken up into the blood to form the bile in the periphery — with a peculiar and characteristic acid, the Cholic, whose formula, as given by Demarçay is $C_{42} N H_{36} O_{12}$. From its containing nitrogen it is evident that the products of some of the transmuted tissues must have aided in its composition, as nitrogen exists in none of the Elements of Respiration. It has been subdivided into two acids, the Cholic and the Choloidic, and has been forced to yield numerous other products, which, however, are so obscure and their existence, as such, in the body, so problematical, that it is needless here to notice them farther.

When it is considered how large a quantity of bile is secreted in every twenty four hours, (amounting in the adult to about 17 oz.) and how minute a trace is found in the excretions — the fæces yielding but $\frac{1}{10}$ of their weight to alcohol, and this on incineration giving evidence of no soda, — it is obvious that the fluid must subserve some important office in the economy, and must escape in some other form. In the urine it is never found, in health, and although an enema of bile is rapidly absorbed, not a trace of it can be detected afterward in the renal excretion.

None of the various eliminated products contain the slightest particle, and it must therefore have escaped from the lungs as water and carbonic acid.

When the bile is poured into the duodenum, and mingles with the chyme, its alkaline reaction neutralises completely the acidity of that fluid, and the now alkaline chyle acquires the power of dissolving and assimilating the various oils and fats of the food. With these, the bile, which is itself most perfectly soluble, enters the blood, and is now entirely and finally oxygenated in the periphery; its nitrogen possibly joining itself to some of the disintegrated tissues, its soda combining with the Sulphuric and Phosphoric acids of the metamorphosed Protein to escape by the Kidneys, and its hydrogen and Carbon assuming the forms of water and carbonic Acid. The amount of Carbon thus exhaled from the lungs, is actually more than that secreted during the same time by the liver; so that the objection of some physiologists who assert that the bile must find some other way of escape, and who will persist in searching for it in the faeces, is altogether unfounded.

When we reflect on the small proportion of fats or oils

and the large quantities of Starch and Sugar contained in the articles which form the diet of the herbivora and gramivora, and remember that the tissues of these animals correspond in quantity exactly to the amount of protein compounds in these substances, being capable ~~only~~ of formation only from azotized bodies; and at the same time observe the rapid production of fat in their organisms, - no other conclusion can be drawn but that these amylaceous and saccharine products have been converted in their systems into this fat: a conclusion more readily acceded to after observing the close similarity between the two classes, as just noticed, and the ready convertibility of the former into the latter.

Starch, during the process of digestion, as ample experiments have proved, is resolved into Sugar, and that most probably Glucose, or Grape Sugar, a change which depends simply upon the addition of the elements of water - Thus 1 equivalent of Starch $C_{12}H_{10}O_{10} + 2HO = C_{12}H_{12}O_{12}$ = 1 eq. Glucose. This change also can be effected in the Laboratory by means of Sulphuric Acid. At what particular point in the process of digestion this takes place is not clearly known, but it is probably at an early stage, as after a meal of farinaceous

food the chyle exhibits evident traces of sugar.

Now if this starch or sugar, (Gum follows the changes of starch) meet in the periphery with sufficient oxygen, it is converted into Carbonic Acid and water; while if this gas be not supplied, it undergoes a further change into fat: as e.g. Glucose $C_{12}H_{12}O_{12} + 24O = 12$ eq. $CO_2 + 12HO$; but again $C_{12}H_{12}O_{12} + 4O = 4HO + C_4O_4 + C_8H_8O_4$ Butyric Acid.

Thus in this very transformation there is thrown open a new supply of oxygen, and a new source of animal Heat; but it must be borne in mind that though these various transmutations may modify the time in which the heat is given out, no greater amount of Caloric can be ultimately evolved by any of these substances than that which is furnished by the final combination of all their Hydrogen and Carbon with the oxygen of the atmosphere.

The last Element of Respiration which we shall consider is alcohol. This substance is itself a product of previous Eremacausis, being formed from Grape sugar, (which in the formula may be considered as a hydrated bi-carbonate of the oxyd of Ethyl, though it seems to contain no carbonic acid as such) by a separation of Carbonic Acid. It may be shown thus: –

1 eq. Glucose $C_{12}H_{12}O_{12} = 2$ eq. Ethyl $2(C_4H_5) + 2O + 4(CO_2) + 2HO$.

$C_{12}H_{12}O_{12} - 4CO_2 = C_8H_{12}O_4 = 2$ eq alcohol. And $C_4H_6O_2 + 12O = 6HO + 4CO_2$.

Thus the availability of Alcohol as a means of evolving Heat must be diminished by the amount which has been expended in the earlier Metamorphosis. It possesses however the advantage of extreme solubility, and evinces a greater readiness to combine with Oxygen than any other Respiratory Element; so that, although it does not by its own elements augment the amount of fat in the human body, it supersedes that substance in the periphery by its stronger affinity for oxygen, and thus causes its deposition, unconsumed, in the interstices of the tissues, and on their surfaces.

When Alcohol is taken into the stomach its low specific gravity, and its exceeding willingness of solution, cause it to be immediately absorbed by the minute venous capillaries in which the alimentary tube abounds; ~~and~~ hence it proceeds directly to the lungs, and from them to the arterial and peripheral system. Its readiness of evaporation causes its odor to be so discernible in the expired vapor; but with this single exception it is eliminated as alcohol from no organ of the body, nor does the slightest trace of it occur in any of the tissues.

Thus the inorganic elements mounts by the energy of Repulsion step by step until they reach the acme of organic life, then step by step they descend to their original station, again to rise, and again to decline. Yet slowly and imperceptibly the quiet, strong resistance of Nature gains ground; all things are striving toward an Approaching, a condensation, a concentration; and though ages elapse, the usurpation of Zeus must at last give place to the reinstated reign of the Titan.

Meanwhile Life follows on Life, every ebb has its flow, every Action its Reaction; and the symphony of Existence moves on with measured beats like the pulses of a Mighty Heart.

An Inaugural Dissertation On Cinchona and its Preparations

Submitted to the Examination of the Provost Regents and Faculty of Physic of the University of Maryland for the Degree of Doctor of Medicine

By

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of Baltimore Maryland

The mind which has been exclusively directed to the investigation of a favourite subject, is unwilling to persuade itself, that its powers, however feeble, have been concentrated in vain. Since the faintest rays, when collected into a focus, can produce some degree of illumination. It was an impression of this kind, which led me to think on a subject, and write out the results of my limited observation and experience, and the present paper, whilst it is but a production called for by custom, which an extended observation may find useful ——

The subject to which our attention has been directed has within itself ~~the relation~~ the relation, which an external agent may bear to living matter, and the effect it may produce upon the living economy. In the proper arrangement of this subject, many difficulties have to be encountered, and hence, much will be given which is imperfect and empirical ——

The proper treatment of Fever has always been a

Subject of unusual interest, with those whose objects have been to pursue the Study of Physic, with an eye single to practice. And I regret to say that there is no subject, in which there is so much difference in sentiment, (And perhaps we may add) so much useless speculation. Every Author has his own peculiar definition, and builds upon it his peculiar theory. Laying the views of each aside and profiting by observation, we are brought to view the effect of different substances upon the animal economy. Among them are the medecines calculated to correct certain morbid conditions of the system, by acting upon the Tonicity of the muscular Fibre.

Tonics are those remedial agents, which are calculated to build up the system without increasing the action of the pulse or animal heat, the activity of the digestive organs increased, proper secretions promoted, the strength of the system increased, health and vigour given to the body, and the whole animal economy benefitted.

We have many theories in regard to the Modus Operandi of Tonics. but I think it is now admitted, that they are taken in the circulation and then distributed to all parts of the body. Having alluded to the want of a well established theory, and the certainty of partial empiricism, we are brought to the consideration of our subject viz

Cinchona and its Preparations

The introduction of this medicine into practice shows one of those accidental discoveries, which characterize many other valuable agents — Cinchona has long been known as a medicine in Peru, and hence its common name Peruvian Bark. It was first used in Europe in 1640 when the countess Cinchon was cured of Ague by means of it and hence its name Cinchona It has been called Jesuits Bark, because of its having been recommended by the followers of Loyola (the Father of the Jesuits) it was introduced into practice, after having met with considerable

Opposition by many eminent Physicians. Its efficacy however, soon overcame the groundless clamor against it

There are many different varieties of bark described by Botanists. but our observation must be confined to the "genus" and cannot extend to the endless variety, mentioned by many Authors The tree is said to be found among the mountains and attains a considerable size. They are barked during the dry season which from May to September, it is prepared for market by being sun dried, and promiscuously packed in Spanish hides. These bundles are after-ward refined, and the different kinds assorted and brought to our market enumerated as Pale Bark, Yellow Bark, and Red Bark.— There is a variety of Pale Bark, brought to United States in the shape of quills, and is obtained in the Province of Loxa and the Flat from Guanaxo- this is much used, but is not so efficacious as the.

Yellow Bark. this is the second variety. it is ~~no~~ darker colour than the pale, and is in larger quills. ~~this variety~~ it is much more pungent Publick attention was first called to this variety in 1790. by Mutis, who considered it powerfully febrifuge ——

Red Bark comes in thick, flat, large pieces, is heavy, firm, and dry. when powdered it is of a brownish red colour, is much more bitter and astringent than the other varieties. These are much valued in the treatment of diseases of an intermittent type. Though we regret to say, that much imposition is practised upon the publick by the adulteration of them. Hence the necessity of observing the different characteristics of the several varieties For instance it is necessary ~~colour~~ to observe the colour &c of the fracture. Which in the common variety, is clean and even, ~~externally~~ externally of a bright cinnamon colour. The yellow Bark, the fracture is fibrous.

The colour is of a deeper red. The Red Bark breaks with a smooth ~~varied~~ fracture. composed of three layers. and when powdered presents a reddish colour. There are other varieties of bark. which are called Carthagena Barks. which are of an inferior quality
Though the medicinal qualities of all the varieties depend upon their alkaline principles cinchonia and quinia. and especially upon the latter

Cinchona. in substance when taken into the stomach. excites a warmth in the epigastrium. which diffuses itself over the abdomen and even the thorax. When the stomach is irritable. it generally excites nausea and vomiting. purging sometimes accompanies the use of this remedy. the pulse is generally quickened. and when we give it in large doses. it gives rise to distressing cerebral symptoms. which ~~gives rise~~ are marked by pain in the head. ringing in the ears

Deafness &c. In small doses it is a valuable tonic and in low typhoid cases it is indicated. "And it often it has passed into the suppurative stage, it is often of much service in supporting the system until the morbid action ceases" and in the latter stages of Typhus Scarlatina Malignia. Measles. Small Pox Measles. as a tonic in all cases where the system is exhausted by purulent discharges. But in all cases where we administer Cinchona we must examine closely, to know wether we have irritation of the Stomach &c. for it does harm, when we have these complications. But it has another property much more valuable than its tonic power. Viz its antiperiodic power. by which "it breaks the chains of morbid association and interrupts the progress of the disease" And by what means we know not but it acts as an antidote to the morbid poison (Malaria) and in the treatment of fevers caused by it, the Yellow or Red Bark is preferred

because the contain more Quinia. Unlike excitants they do not add to the excitement in fevers.
In the treatment of intermittents, it has been always thought proper, to empty the Stomach by an emetic or cathartic. And in the intermission commence the use of the Cinchona —
The cold infusion is the form in which this agent is administered: it is much better retained in the Stomach in this way.
Prof. Chew recommends, that when it is necessary for us to give this remedy to children, that we should make an infusion with milk, which destroys the taste if taken amediately.
In intermittents, we should commence with doses ℥i to ℥ii to be repeated every three hours.
When it excites nause or vomiting, we should combine with it a few grains of Pulv. ipecacuanha and when it runs off by the bowels add Tinc Opii gtt x to x. Cinchona generally arrests the paroxysms of Intermittents, But when complicated with other diseases.

It is necessary to remove these complications. before the Cinchona will be of much benefit. It has been frequently found necessary to introduce this remedy by other surfaces than the stomach. Thus when the patient is unable to swallow we can inject it into the rectum by which means it exerts its full powers. and in a much shorter time than when given by the mouth; when used in this way we should combine with it. a few drops Tinc Opii, as it is apt to purge. From the large quantity of Cinchona which it is necessary for us to use to check Intermittents &c. The stomach being generally irritable and not able to retain it. Chemistry has came to our assistance. and extracted from it the two well known Alkalies Cinchonia and Quinia the latter of which possesses all the febrifuge qualities of Cinchona. and is much more grateful to the stomach. There are a great many different

processes by which Quinia is obtained ~~as~~ but is used by us in combination with Sul. Acid. Sulphuric Acid is added to cinchona with a quantity of Charcoal. the acid unites with the Quinia forming a Sulphate Quinia and the charcoal absorbs the impurities. Thus obtained, "is of a silky, fine, needle shape chrystals, interlaced among each other or grouped in star like tufts" its taste is intensely bitter, it is slightly soluble in cold water, soluble in alcohol, it is decomposed by the Alkalies.

Owing to the high price of quinine we find it frequently adulterated with Starch Sul. Lime, but we can generally detect these by there being precipitated when we add an excess of acid which dissolves the quinine It produces all the effects of cinchona upon the system, though in a more marked manner. its effects upon the brain are more striking though some persons are much more susceptible

To its influence than others. when we find cerebral disturbance after the use of quinine we may know that it has been occasioned by its use. and we know by this that it is exerting its peculiar influence upon the system. we have frequently from its use partial deafness which may last from two to ten days. Sometimes irritates the stomach and we have gastritis Quinine may be substituted for cinchona in all diseases in which the latter is applicable and in the cure of intermittents it has entirely superceded the bark. though it sometimes happens that we are obliged to resort to the use of bark. when we have used the quinine without benefit ——

Sul Quinia is now considered as a direct antidote to malaria. and hence it is our sheet ancho in all diseases assuming an intermittent type. During the past season we have a great many patients in the wards of the Infirmary have been treated for this disease.

And by the use of this valuable agent we were able to arrest the paroxysms in a short time. And of the whole number treated there, but two returned with another attack of Intermittent. and the class of patients treated there, were generally Irish laborers at the mine banks near our city. and were unable to stay longer at the Infirmary, than it was necessary to arrest the paroxysms, and this I suppose will account for the few returning with another attack. In all cases where the patients remained for some time in the wards, quinine was continued one week after the paroxysms were arrested.

In the treatment of Intermittents we should (as in the use of cinchona) empty the stomach by means of an emetic or cathartic, and in the interval. Dr Wood recommends that we should give quinine in doses of from gr x to ℥ every two hours. But Prof. Chew gave it in doses of from gr iij to ℥ every two hours, and in this

way. he was able to check the paroxysm in a very short time. and if it proved obstinate he gave it in larger doses. until it produced cerebral disturbance When he discontinued its use for a short time

In Remittent Fever. which is also caused by the poison Malaria, Quinine is equally efficacious. We use quinine in this disease as in Intermittent Fever. we must sometimes commence with much larger doses than the simple Intermittent. and endeavour to bring the system under its influence before we have a return of the paroxysm

In Pernicious Remittent another form of the above diseases, quinine is invaluable. and rescues a patient as it were from the Jaws of death. in this disease we can seldom precede it with an emetic. but must commence the use of quinine in large doses at once. frequently we combine it with Capsicum. during the months of August.

September and October, we received a great many patients with this disease in the Balt. Infirmary and the majority were Sailors belonging to the coast Schooners, and contracted pernicious remittent, whilst upon the shores of Georgia One case in particular, in which I saw the beneficial results, from the use of quinine, I shall now mention — — — — —

James Vaugh, Seaman, native of Maine has been on the coast of Georgia since May last when he had an attack of Pernicious Remittent for which he was treated ~~for~~ in the Marine Hospital of Savannah, and was discharged on the 6th of June ceased. He enjoyed very good health from that time, until the first of Aug. when he sailed for Baltimore. A few days before he reached our port, he was taken with headache, pain in loins, repeated rigors followed by violent fever, for which he was treated by Dr. Dashiell of Broadway, without much benefit, when he arrived at the.

Infirmary. his extremities were cold. scarcely able to detect any pulse at the wrist. body covered with cold perspiration. tongue with brown fur. dyspnoe. subsultus. and involuntary evacuations He was seen immediately after his arrival by Prof. Chew. who ordered ~~immediately~~ Quinine grs xv at once, to be followed by three grain doses every half hour. Aug 5th 3 o'clock P. M.

Pulse of our patient is 120 ~~pulse~~ small and weak. Extremities still cold. he is now sensible. but distressing cerebral symptoms from the use of quinine. also partial deafness. is now ordered Sinapisms to extremities

Aug 6th Reaction has now taken place and patient very much improved. Still very deaf from the use of the powerful doses of quinine. He gradually improved ~~and~~ was discharged of the 29th of September perfectly well.

I might give you many other ~~cases similar~~ to this treated by Bros Chew & Power.

in the same way. (viz by quinine) but this will suffice.

One other case of this disease I will mention which the patient was unable to swallow. and in the absence of our Resident Physician was treated by Mr R. J. Dorsey. with quinine and Capsicum by the rectum. and the patient ultimately recovered.

Another very good method. (Recommended by Prof Chew) of using this medicine. when we wish to produce its effects quickly is to remove the cuticle with Nitric Acid and sprinkle the surface with quinine. in this way it taken immediately in the circulation. and produces its full effects in two hours. by the rectum in four. and by the mouth in six.

It is not only in <u>Fevers</u> produced by malaria that quinine is beneficial. but in any disease which marked by its periodicity. and is repeatable to the same morbid poison.

Thus. Rheumatism. Neuralgia. Diarrhoea Dysentary and asthma. very frequently assume a periodic character, and are equally under its influence.

In Periodic Rheumatism especially I have seen much benefit from the use of quinine John O'Brien admitted into the ~~Int~~ Surgical Ward of the Infirmary Dec 25th came from a Malarious district. has been labouring under acute Articular Rheumatism for three weeks and the attacks came on regularly every day at one o'clock. Prof Smith ordered quinia grs iij every two hours, under which treatment he recovered in a few days.

Neuralgia, quinine is used in this disease both when periodic & constant, in the latter form it is a valuable agent acting as a tonic. but its effects are more certain in the periodic form.

In enlargement of the Spleen or the sequelæ of Intermittent Fever, quinine-

During the past year. owing to the high price of Quinine. a substitute has been proposed for it. which is called Salicine. an extract from the bark of the willow. Claiming to be equally efficacious. in the cure of Intermittents Prof. Chew. gave it a trial at the Infirmary and the results were not very favourable and in some cases we were obliged to resort to the use of quinine to arrest the paroxysms. Notwithstanding it has been found wanting. in many cases its cheapness. in connection with the fact of its being indigenous. gives it claims upon our attention. and we hope the time is not far distant. we shall be able to find some domestic substitute.

Having now complied with the requisitions of our institution. as far as was in my power. in connection with subject. I respectfully draw my effort to a close. hoping that the attempt may be the means of directing my mind. to the full —

~~Investigation~~ Appreciation of the remedy before me

I am now about to leave those with, who I have been associated for the last two years. And whilst I regret it I feel by their example, and influence, I have profitably devoted my time and attention, to the consideration of useful medical subjects.—

J. Milton H. Chapster.

An
Inaugural Dissertation
On

Hysteria

Submitted to the examination of the Provost, Regents
and
Faculty of Physic
of the
University of Maryland
For the Degree of
Doctor of Medicine
By
George W. Taylor
Of Missouri

It could scarcely be expected of one who has but little time and many urgent engagements to enter into a minute description of a disease which presents such a variety of symptoms and respecting which nothing definite is known. All that a student can do in such a case is to give the ideas of those who have written before him and whose views are more extended and satisfactory. The subject which I have chosen for my inaugural dissertation is wrapt in a cloud of mytery from beginning to end: and the practitioner is often thrown off his guard where there is no just cause for alarm: he is apt to mistake the disease for one of a violent inflammatory character and use the antiphlogistic treatment to its fullest extent when assafetida would meet every indication. There is no disease so

well calculated to deceive the medical attendant as this, sometimes putting on the most violent and distressing appearance which would lead the unexperienced eye to suppose the patient was dying whilst to use the language of Dr. Wood 'tis a mere ebulition on the surface of life — another strange thing is that amid such apparent distress, nutrition seems to go on with perfect integrity and the patient remains plump and even rosy This appearance would be sufficient to lead us to suspect the existing state of affairs — but any one condition of the corporeal frame is not to be looked for nor is it to be expected as every grade of appearance from the rosy buksome dame to the weak and emaciated frame of confirmed phthisis will be presented in hysteria. The class of persons most subject to hysteria are weak chlorotic girls whose nervous

system predominates (Doct Laycock says that chlorosis does not predispose to hysteria) The causes of this disease are very numerous. all impressions to which the nervous system is susceptible and all the various casts of mind which affect the proper equilibrium of mental and physical exertion aids in a greater or less degree in the production of that peculiar state which predisposes to hysteria. Any thing making a sudden impression upon the nerves. such as love, anger, ~~affright~~ fear, joy evil anticipations or the gloomy casts of some minds will act as an exciting cause in developing the morbid tendency and bringing it into action The kind of light literature much in vogue among the fashionable part of society is of an exciting character and those persons who have a weak body with a strong and brilliant immagination and whose

mental powers are cultivated many years in advance of their physical are apt to be so deluded by such thrilling incidents and their minds taken off the sober train of thought to which it was accustomed and more particularly by making them wish for familiarity with the other sex that their nervous system is thrown off its proper balance and hysteria is ushered in with all its evil train of symptoms. The sight of a person in a hysterical convulsion has thrown another person previously exempt into a similar attack. The uterus and its appendages are the seat of the disease much more often than all the other organs of the body — the reason why this is obvious is because it very rarely occurs in the other sex and almost always occurs in the female during the active period of the uterus

and we know when the functions of this organ is suspended the nervous system suffers to a greater or less extent; not necessarily inducing a paroxysm It has been stated that pregnancy suspends this tendency and in some cases has proved entirely efficacious in removing it; but in the majority of instances it returns if the health and general condition of the patient be not materially improved which is not at all likely unless some other disease be eradicated which existed in the constitution at the same time. It is an almost endless task to enumerate all the symptoms which have been pointed out in all the forms of hysteria About the approach of a paroxysm there is some uneasyness in the epigastrium and difficulty of breathing and a

vague feeling of distress and uneasiness all over the body which gradually increases, "until the patient becomes so much agitated that the nervous centres can no longer tolerate it and relief is sought in violent muscular exertion", which after lasting a longer or shorter time is succeeded by a calm, a vacant look, and an almost unaccountable feeling of insignificance. Sometimes a large quantity of pale limpid urine is voided which seems to afford considerable relief. The paroxysm does not come on and go off as above described but there will be presented many differences in respect to character duration and symptoms. Tenderness along the course of the spine is almost always to be remarked by making pressure on the spinous processes of the

vertebrae. Great distress in the region of the Epigastrum owing generally to other causes than disturbed nutrition During a paroxysm the body is in some instances bent forward (Emprosthotonos) and backwards in a perfect arch (Opisthotonos) while being inclined to either side (Pleurosthotonos) is not of so frequent occurrence as those above mentioned. They appear in some instances in the most seeming distress with their arms and legs in constant and violent motion and it will take two or three strong men to restrain a weak girl and keep her in bed from injuring herself and others. The gastric derangement will often seem to be great but by making gentle and continued pressure if it be of a nervous origin it will be relieved

but if it be of an inflammatory character it will be aggravated Tenderness of the abdomen is common when the bowels are distended with flatus or faeces and this tenderness often exists to so great an extent as to simulate peritonitis which by observing the pulse and general condition of the patient could scarcely be expected to be any thing but nervous. The countenance in the one is haggard and indicative of great prostration whilst in the other the suffering appears superficial and no great prostration is apparent And you will notice the globus hystericus which annoys the patient with feelings of immediate suffocation they immagine a ball is ascending their throat and often express great concern for fear of being overwhelmed

by it. Spasm of the glottis is another occurrence which we are apt to mistake as it very closely simulates laryngitis - but by taking into notice the previous history of the case and by observing that the spasm is relieved by the relaxation of the system from suffocation we can mostly come to accurate conclusions - but in some instances where the former history of the case could not be ascertained the most experienced have failed to detect it under its new garb and have even gone so far as to make an opening in the trachea - The difficulty with which some women menstruate induce an attack at regular periods. which has given rise to the erroneous and vulgar idea that the moon exercises

some influence over it. The patient is alarmed and uneasy in expectation of an attack the invasion of which as a matter of consequence is only facilitated and assisted in its advancement by disquieting the nervous system. The mind like any other powerful excitent aids in the developement of this morbid tendency The regularity in the occurrence of the paroxysms have led some to the conclusion that it is nothing more than a malaria modified by the peculiarities of constitution. The sulphate of quinia if this be the case would be worthy of trial as it is proven by experience that this remedy exercises a peculiar beneficial influence over all diseases of a periodic character

Among the diseases counterfeited by hysteria are. gastritis nephritis apoplexy peritonitis laryngitis asthma inflammation of the brain and organic disease of the heart — sometimes attended with the bellows sound during the paroxysm — which generally is not to be detected after the excitement has passed off this is never observed except the patient be very anaemic The appetite is often depraved, craving articles of food which are entirely indigestible and not at all suited to carry on the necessary perpose of nutrition There is often a disposition on the part of the patient to practice deception, they will tell you that they have not voided their urine or they will say that

they have been passing stones from the bladder and instances are on record in which stones have been represented to have been voided which were not in any point like a urinary calculus. The patient will tell you that her bladder is distended and is solicitous that an examination be made and the introduction of the catheter will often afford relief for a short time if the same measures be resorted to the practitioner will be troubled by the earnest and repeated solicitations of the patient when timely determination on his part would have proved entirely efficacious, and at this time it seems to them an impossibility to walk or to make any kind of muscular exertion

The disease occasionally makes its first impression by suspending the voice after which more evident symptoms ensue - My former preceptor Dr James H Turner of this city had a case in which the first and most prominent symptom was aphonia brought on by exposure and stoppage of menstruation - another case I saw when his pupil in which crying laughing and singing were the only symptoms present. and brought on by a similar cause

The management of those different circumstances occurring in this disease must be of course somewhat dissimilar There is no man however experienced who is not occasionally deceived by the fallacious way in which this disease insinuates itself into the peculiarities of constitutions

If tenderness be observed along the course of the spine it should be obviated by cups leeches or issues which may be continued as long as the strength will permit or untill the tenderness disappear, Local to general bleeding should be preferred and as little blood as possible be taken to meet the indications because the class of persons most subject to hysteria are chlorotic The loss of a moderate quantity of blood will often leave the patient in a feeble and anaemic condition the effects of which may be seen for months as the blood making powers are in a depressed condition. During the convulsive paroxysm much may be done to shorten it and this is of the utmost importance as secondary depression follows such violent Excitement

the administration of some one of the nervous stimulants will become requisite and as little restraint as possible be employed to keep her in bed. sprinkle some cold water in her or apply some pungent smelling substance to the nostrils the object of which is to make a quick and decided impression upon the nervous system, but if the extremities be cold with a languid circulation in spite of the means already spoken of something of a more stimulating nature should be employed in conjunction with sinapisms to the extremities and inner part of the thighs
If there appears to be much congestion of the brain suffusion of the face and engorgement of the veins cold lotions would be of

service to the head — It is particularly necessary that the bowels be well moved as fecal accumulations act as an exciting cause by producing unnecessary irritation prolongs the attack and makes it less susceptible to the impression of the remedies. The functions of the uterus should be kept in mind and when out of order should be instantly corrected as the health is always effected by it — after the patient has suffered long from hysteria with disordered menstruation the mental faculties are observed to fail sometimes and you will have almost every grade from mere mental debility to the most violent insanity but not generally they are of

a melancholy character with all kinds of foolish whims
The vicarious is a very curious deviation from natural menstruation and often appears in hysteria which seems a provision for, in some degree the means of mitigating the constitutional effects of suppressed menstruation It is recorded to have taken place from the nostrils eyes gums lungs stomach anus bladder nipples ends of the fingers and toes from joints the axilla from stumps of amputated limbs. from ulcers. varicose tumours and from the skin generally The mucous membranes being most frequently the seat of the discharge which may occur at regular periods and no great mischief result though

delicate organs be its seat and they often have a urinous smell when this secretion is small During the paroxysm rigidity of the muscles are to be counteracted by a warm bath which will relax the muscles and invite back the menses if they be suppressed: but if it does not succeed and no contraindicating circumstances be present Chloroform may be given with decided benefit it would relax the muscles quiet the nervous system and put the patient in a calm and profound sleep from which the patient would awake perfectly relieved and if it seems repeat the same means untill you have subdued this spasmodic tendency which can soon be done by Chloroform

The general health of the patient should be attended to and every thing calculated in the slightest agree to disquiet the nervous system should be avoided country rides on horseback or in carriage residence among the mountains light nutricious diet and regular bathing in cold water constitutes the principle hygienic rules to be enforced The change of a married for a single life particularly agrees with some women and to such of them who could embrace such an offer it would be as well for them and it has been observed more than once of such women that their health gradually improved unless recovery was the consequence.

But an imperfect view of this subject has been taken and its pathology has been entirely omitted which must of course be dissatisfactory when medical authors have given us nothing precise
I have endeavoured to give but a plain description of the most common forms of hysteria and passed silently by a great many things which you may think almost as important as those I have taken notice of
The consolation I have. is that I have discharged this duty to the best of my knowledge and hope that it may be kindly received by my teachers

George Wash Taylor

An
Inaugural Dissertation
on
Pneumonia
Submitted to the examination
of the
Provost, Regents & Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
By
William H. Rogers
of Baltimore

Pneumonia is most frequent of all the parenchymatous inflamations of the lungs. This may be caused by the application of any cooling influence to the body thereby exciting undue activity in the circulation of the lungs and the blood conveyed to the lungs being more venous than customary calls for increased respiratory action in those organs, this and the increased flow of blood bring the organ into a state liable to inflamation. It has also been attributed to excessive exertion the inhalation of asphyxiating gases and vapours Alcohol in its various forms these causing congestion it then only requires reaction to convert this congestion into inflamation. The bites of some venomous serpents and other poisons may excite pneumonia possibly by the blood containing this poison circulating through

the lungs. It has been supposed by some to be of an epidemic character. and it makes its appearance frequently in eruptive fevers upon the untimely subsidence of the eruption there is also occasionally dispnoea preceding the eruption which frequently ceases upon its appearance.

Bronchitis Hooping cough Metastasis of the inflamation of the gout Rheu-matism. Severe accidents. Surgical operations Tubercles in the lungs them-selves may all bring on inflamation in the lungs in the majority of instan-ces by first causing congestion and this congestion lighting up inflamation

Since the discovery of auscultation and percupion we can acertain with more precision the pathological pro-ces of pneumonia can could be obta-ined in any other way. for through

their means we apply our senses to the very seat of the disease. I shall now attempt to describe the sig-ns. At the first appearance of in-flamation in the lungs if we apply our ear over the effected spot we will hear a peculiar sound with the usual respiratory murmur. It is a fine crackling or crepitating sound like that produced by rubbing ones hair next his ear or like salt when thrown upon a heated iron also like the crepitation of a healthy lun-g when pressed between the fingers.

This sound is called crepitant rhon-chus or rhall and is pathognomic of the first or engorged stage of the disease. The parts where this sound can generally be heard are below the axilla Inferior margin of the scapula and over the lower lobes of

the lungs which far more often are the seat of the disease than the up-per. This crepitation is generally feeble at first and heard with the respiratory murmur but after the disease has made some progress it is often the only sound heard over the diseased portion of the lung

And when we have this increased crepitant rhonchus we begin to have some dulness on percussion which is to be detected by comparing the diseased spot with a similar spot upon the sound side.

The progress of the inflamation is understood by the crepitations becoming more irregular and only heard at the last of each inspiration and as the lung begins to hepatize it is only heard when the patient coughs or takes a deep ins-

-piration and when the hepitization becomes more perfect it is not heard at all also as the crepitant rhonchus diminishes the respiration on the sound side becomes louder in proportion to the disease on the op-posite side this is termed puerile respiration.

In the second stage therefore we have dulness on percussion and on applying the ear we cannot distin-guish the crepitant rhonchus or the usual respiratory murmur but now we frequently hear a blowing or whistling sound taking their place this is termed bronchial respiration and is most frequently heard when the patient coughs A singular resonance of the voice is also sometimes heard at the same points termed Bronchophony. In

the third or suppurative stage with the dulness on percussion of the second there is frequently a coarse mucous rhonchus and this is the only evid-ence of the termination of inflama-tion. If the suppuration becomes complete and an abscess is formed in any part of the lungs we have no sound informing us of this un-till some of the matter is spat up then we have gurgling and cavernous respiration owing to the bronchi communicating with the cavity.

I will go on to give some of the symptoms of this disease. Like other inflamations of a serious character it usually begins with a chill sometimes this chill does not make its appea-rance untill after the pain. dispnoea Langour, pain in the back and limbs a disordered state of the stomach and

bowls and sometimes is not felt at all but the first is by far the more common then after this chill & Vio-lent reaction takes place and after this reaction is set up we have another train of symptoms occurring such as. Fever. pain in the breast and dis-pnoea with more or less cough. This fever may last for a short time be-fore the local symptoms show them-selves though it is not generally as violent after these symptoms make their appearance though they sometimes continue and afford a serious obstacle to our diagnosis. One of our first Sym-ptoms is pain in the chest which is sometimes very severe and at others dull and deep seated and more to be compared to a feeling of weight than pain this uneasiness if found most frequently below the Sternum. Clavicles

and mammae but when acute pain is felt we generally have it in the side owing to a complication of ple-urisy. Now with this uneasiness or pa-in we generally have cough agravating it this cough at first being dry or the sputa being indicative of Bronchi-tis and is by no means equivalent to the severity of the inflamation.

Dispnoea is a much surer indicat-on of the severity of the disease yet this also is not infallible as patients are often unaware of its existance when it can be overcome by breathing a little more frequently this frequency of respiration sometimes reaching to as high as from thirty to sixty inspi-rations in the minute when in the hea-lthy adult it is only about twenty in the same time. The patient frequently assumes one posture when this dispnoea

is excepine on his back or side with his shoulders elevated He avoids all exertions such as talking or mooving from their causing pain and increase of dispnoea. As the disease proceeds the dispnoea becomes more appreciable the pulse is quick sharp and generally full at the beginning of the disease but becomes weaker as the disease advances. The tongue is frequently fur-red with great thirst loss of appetite head ache pain in the back and limbs depression of strength urine high colou-red blood when drawn exhibits the buffy coat with a concave cresamen-tum and we also have frequently de-lirium with sickness of the stomach

These are symptoms most frequently present for the first twenty four or forty eight hours and during this period we have expectoration or the

expectoration is changed from that of bronchitis to the characteristic sputa of Pneumonia which is a semi trans-parent tenacious mass of a yellow reddish or rusty tinge owing to the different proportions of blood from the bronchial mucous membrane Its tenacity varies from that of the white of an egg to a mass that is so tenacious that if you turn the vessel up side down that contains it it will not fall out. Now the dispnoea becomes more appreciable but the pain frequently subsides or is lessened.

In mild cases the disease may go on in this way untill the third or fourth day and then gradually die away owing to the decrease of the inflamation which can be made out by the alle-viation of the symptoms this allevial-ion consists in the relieval of pain

and dispnoea the cough begins to be
looser and of course does not cause
so much pain to bring up the expecto
-ration the sputa gradually assumes
now the appearance of the sputa of
bronchitis the pulse slowly looses
its frequency and becomes softer the
urine deposits a sediment and is
more abundant in quantity the skin
begins to be cooler and sometimes
dampened by perspiration the patient
may now be in perfect health in
six or eight days but there is sometimes
some of the symptoms remaining
which should warn the practitioner
that the slightest exposure might bring
about a renewal of the disease even
more dangerous to the patient than
the first attack.

When the inflamation does not ame
-liorate as mentioned before it soon

begins to be more formidable. On the third or fourth day all the former symptoms become agravated and sometimes we have delirium and coma which are dangerous symptoms and often obscures the diagnosis. There is said to be a critical evacuation in most cases of pneumonia the most frequent of these are a deposit in the urine perspiration and free expectoration there are others less common such as epistaxis Hematuria Menses and other hemorhage these are only observed in favourable cases and this change for the better is generally observed in the morning or after one of these critical discharges all of the former symptoms become lessened in their severity and the disease goes on gradually to clear up. In fatal cases

none of these critical evacuations are witnessed the patient gradually goes on to loose strength he expectorates with great difficulty or not at all the expectoration now is frequently changed it is sometimes of a dirty transparent tinge sometimes streaks of pus are visable in it sometimes pure pus with streaks of blood in it but all these expectorations are greatly diminished in the latter stages of the disease owing I suppose to the patients loss of power to cough it up as patients frequently do not expectorate at all for hours before death.

The symptoms of dissolution are these changes in the sputa a thready intermittant pulse the countenance is cadaverous and covered with a cold sweat Breathing difficult with a rattle in the throat and the patient

dies asphyxiated. I will now go on to give some of the evidences of al-tered action in the lungs as are observ-ed in post mortem examinations The effects of inflamation upon the lungs are usually divided into three stages each marked by their seperate symptoms. The first or engorged stage the lung is externally of a dar-ker and more lived hue than natural it is also heavier than heal-thy lung owing to the accumulation of blood within it if you prep it it does not yield as clear a crepi-tus as it would in a healthy condite-on and instead of rising upon the removal of pressure it retains the indentation. When such lung is cut into bloody serum containing nu-merous air bubbles flow from it The colour of diseased lung is not

always the same varying from crim-son to almost black which can be restored to its healthy colour in a great measure by washing it.

The progress which the disease has made can be distinguished by the amount of air in the tissue in the lesser degrees of inflamation of inflamation there is a good deal of air in the lung and becoming less and less according to its intensity you have also less and less crepita-tion in the same way and the accu-mulation of serum is larger in in-tenser cases which have lasted but a short time.

The second stage or that of Hepatiza-tion the lung feels solid and there is not that crepitus fell that there is in the first it is also greatly heavi-er than healthy lung and appears

to the touch more like liver than lung the fingers can be easily pushed through lung of this sort. The lungs also appear larger when the chest is op-ened owing to their not collapsing from the pressure of air without. Its colour is not of so deep a red as lung in the first stage. The ap-proach of the third stage is marked by the lung becoming lighter in co-lour of a salmon colour or dirty pink and resembling marble from the mixture of black pulmonary matter. It is now heavier than at any other period and can be ea-sily crushed to a pulp by squeezing it.

The third stage or that of purulent infiltration can be easily diagnosti-cated by the lung assuming a yel-lowish gray or stone colour or

Bluish green if you cut into it at this period no matter exudes in this early stage of suppuration but there is evidently pus retained in it for if you squeeze it it will be crushed to a mere pulp evidently containing pus. When this stage is more advanced it becomes of a straw colour or dirty yellow if you cut into it now pus oozes out more or less as the lung has suppurated this purulent matter is sometimes found in large abcesses or in smaller ones diffused throughout the lung.

Treatment: Bleeding is our first and most reliable resort in the first stage or that of engorgement and the sooner we use this remedy in the disease the more likely it is to be advantageous. The patient

should be bled sitting or standing up from a large orifice the blood should be allowed to flow untill some symptoms of faintness make their appearance and the pulse becomes softer or if it were contracted untill it becomes fuller

Free venesection frequently brings speedy relief both to the pain and dispnoea and if this amendment is not observed the remedy should be repeated only not to such extent as before at the next visit which should not be longer postponed than from four to eight hours after the first bleeding.

Local bleedings from cups or leaches are also of great benefit, if there is pain they should be applied over the affected portions of the lung. The next remedy of

importance is the tartarized antim-ony which should be given in doses not sufficient to vomit if possible but this can rarely be accomplished untill the stomach becomes somewhat inured to its use so the dose that would vomit and purge when first given would not in all probability do so a second time unless it had been to freely given. We should begin with a small dose about one third of a grain every hour to be increased according to its effects to two grains. Opium is frequently added in small doses to prevent emesis.

In the treatment of the second stage mercury is said to be of most advantage it should be given to produce its specific effect

upon the gums. a good form of administering it is to give one grain of calomel every hour combined with opium to prevent its acting as a cathartic. Blue pill or the Hydrarg cum Creta should be used instead of the calomel if it produces irritation of the bowels but if after we have tender gums and the patient appears more and more debilitated stimulants should be resorted to such as ammonia wine porter &c with a more nutritous diet. The patients bowels should be kept once a day regularly and another remedy of importance is blistering this should not be done as long as there is any great heat of skin or much fever but when there is difficult expectoration and a

good deal of dispnoea at such time as this blisters may do a vast deal of good but to accomplish this the blister should be large.
The great objection to blistering is that it prevents our making out the progress or retro-cession of the disease by auscultation or percussion. I will now go on to give the history and treatment of two cases of this disease noted at the Baltimore alms House
Case 1st Theodore Hunken german entered the Hospital March 12th a man of medium size apparently having enjoyed good health before the present attack age 26
He was taken five days since with a severe chill followed by concidrable reaction and concidrable vascular excitement. He complains

of severe cough and pain in his chest. On examination Pneumonia was found existing in its first stage that of engorgement - Crepitant and subcrepitant rattle in the lungs sonorous rhonchus Bronchial res-piration and Bronchophony. In the course of the afternoon dullness on percussion was observed over the posterior part of the right lung in the lower lobe upper lobe free characteristic pneumon-ic expectoration - The peculiar phenomenon of this case was the crepitant and subcrepitant rattle in expiration as well as inspiration further examination developed oedema of the lung also Endocarditis from the blowing of the first sound of the heart and muffling of the second and the other attendant

symptoms - Pulse full and frequent skin hot and flushed cheeks Physiognomy dull and inexpressive - Much debility urine high coloured and on examination contained an excess of uric acid. - Tongue furred some difficulty in articulation - Bowels open - ℞ ant et Potassae tartra gr iij aqua ℥ij M S A table spoon every second hour - Eight cups before and behind

March 13th Patient much worse than day previous fever high and skin hot all symptoms increased, great dispnoea ℞ ammoniae Carbonas grs XX Fit pulvis iv S one every three hours venesection ℥XXV

March 14th Patient not so well as yesterday pulse 120 aggravation of all the symptoms dispnoea excessive resort to active stimulants carbonate of ammonia and brandy. —— over

℞ Oleum Tiglii gtts ij Sapo albus g.s ℞ fit pillulas ij one now and an hour after ℞ Phos ammoniae ʒ iij do carbonas ʒi pulv gum acacia ʒi aqua distil ℥ vi S table spoon full every four hours if pill does not operate give an injection Medicine given to no avail the patient died at 11 o clock A M

Autopsy Both lungs oedematous and Pneumonia existing in the second stage - grey Hepitization mingled with red much serous infiltration - remnants of old tubercles about the bronchial glands and absorption of the matter - Pericarditis very extensive existed in addition to the endocarditis Beautiful false membrane and effusion in the pericardium to the amount of six ounces Lymph of the thickness of three lines around the heart - Much fibrin collected in the cavities

of the heart and principal vessels
Large clot in the left side owing
to the obstruction in the lungs.
Thickening of the valves and deposit
of opalescent lymph. The abnormal
sounds heard were dependant on
the pericarditis not on any alteration
of the valves. little thickening in the
auriculo-ventricular valve —

Case Second

Wm Butler an American by birth
a man of tall stature and thin
person. Entered the Hospital March
21st This man has been engaged on
the alms House farm as a common
labourer generally has enjoyed
good health 50 years of age
History While at work some days
ago he got his feet wet a short
time afterward he was seized with
a severe chill followed by fever

giddiness in his head &c. He com-
-plains of pain in his right side in-
-creased by a full inspiration - On
examination was discovered bron-
-chial respiration. Bronchophony
and subcrepitant rhal at the base
of the right lung, and no dullness
on percussion. Respiration a little
accelerated Vesicular murmur au-
-dible over the left lung. Tongue
slightly furred no appetite no
nausea Bowels open. Urinates fre
pulse fuller than usual not accel
-erated. Skin cool and relax char-
-acteristic expectoration in abund
-ance

March 22nd Dr Buckler saw him
to day on examination he detected
dullness on percussion in the right
lung Bronchial respiration and
Bronchophony Subcrepitant rale. Pulse

104 and full rate very well marked
Considerable engorgement Expectoration
not as bloody or cough as bad
pain still sharp upon taking a deep
breath and tenderness on percussion
indicating Pleuropneumonia -
℞ venesection ℥xiij ℞ Tar ant gr iv ℥gna ℥j ℥m
30 drops every three hours
23rd Patient better this morning pulse
104 not as full dizziness not a great
continue medicine - Bowels free -
Physiognomy good respiration quite
natural - 40 gtt every three hours
24th Patient very little improved
if any slept none last night
fever high pulse strong 40 gtt every
two hours till nauseated The
man is very weak and prostrated
Auscultatory signs not as favourable
25th No marked change in his con
-dition pulse 112 and not as full

as on yesterday continue treatment
26th Patient worse Pulse increased
in frequency and diminished in force
Subcrepitant-rale over the middle
and lower lobes of the right lung
Bronchophony and Bronchial respi
-ration - dullness on percussion the
rale is much coarser and apparent
-ly near the surface of the lung
probably some Emphysema Pulse
114
27th The man complains of increased
debility Pulse quicker and not as
full His sputa is now marked
Auscultatory signs most grave. Same
treatment continued
28th Patient worse all the symptoms
aggravated dullness increased and over
greater space great dispnoea Fever
high. Urine high coloured much
prostration and great debility —

stimulating treatment

29th Patient died last night about 12 o'clock

Autopsy reveals the right lung very much diseased Pneumonia in the second running into the third stage perfectly solidified red Hepitization running into grey great effusion of bloody serum Lung diseased entire except about two square inches a small portion Emphysematous lung immensely enlarged weighing from six to eight pounds Left lung healthy but very small There is an extensive effusion of Lymph on the pleura covering the lung and that of the pleura costalis. The condition of the pleura accounts for the great tenderness on percussion

I have said nothing of the complications of Pneumonia as the subject would

acupy more time than I could poss-
-ibly devote to it so I hope this will
be deemed sufficient

Yours Very Respy

Wm. H. Rogers